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THE UGANDA PROTECTORATE

2 Vols

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THE UGANDA
PROTECTORATE

THE OKAPI (*OKAPIA JOHNSTONI*).

THE UGANDA PROTECTORATE

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THE UGANDA PROTECTORATE

AN ATTEMPT TO GIVE SOME DESCRIPTION OF THE PHYSICAL GEOGRAPHY, BOTANY, ZOOLOGY, ANTHROPOLOGY, LANGUAGES AND HISTORY OF THE TERRITORIES UNDER BRITISH PROTECTION IN EAST CENTRAL AFRICA, BETWEEN THE CONGO FREE STATE AND THE RIFT VALLEY AND BETWEEN THE FIRST DEGREE OF SOUTH LATITUDE AND THE FIFTH DEGREE OF NORTH LATITUDE

BY

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etc., etc.

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PREFACE

AND

ACKNOWLEDGMENTS

THE territories which were comprised within the limits of the Uganda Protectorate during the time of my administration of that portion of the British sphere in East Africa certainly contain, within an area of some 150,000 square miles, nearly all the wonders, most of the extremes, the most signal beauties, and some of the horrors, of the Dark Continent. Portions of their surface are endowed with the healthiest climate to be found anywhere in tropical Africa, yet there are also some districts of extreme insalubrity. The Uganda Protectorate offers to the naturalist the most remarkable known forms amongst the African mammals, birds, fish, butterflies, and earth-worms, one of which is as large as a snake, and is coloured a brilliant verditer-blue. In this Protectorate there are forests of a tropical luxuriance only to be matched in parts of the Congo Free State and in the Cameroons. Probably in no part of Africa are there such vast woods of conifers. There are other districts as hideously desert and void of any form of vegetation as the worst part of the Sahara. There is the largest continuous area of marsh to be met with in any part of Africa, and perhaps also the most considerable area of tableland and mountain rising continuously above 6,000 feet. Here is probably reached the highest point on the whole of the African continent: namely, the loftiest snow-peak of the Ruwenzori range. Here is the largest lake in Africa, which gives birth to the main branch of the longest river in that continent. There may be seen here perhaps the biggest extinct volcano in the world—Elgon. The Protectorate, lying on either side of the equator, contains over a hundred square miles of perpetual snow and ice; it also contains

a few spots in the relatively low-lying valley of the Nile, where the average daily heat is perhaps higher than in any other part of Africa. Within the limits of this Protectorate are to be found specimens of nearly all the most marked types of African man—Congo Pygmies, and the low ape-like types of the Elgon and Semliki forests, the handsome Bahima, who are negroids as much related to the ancient Egyptians as to the average Negro, the gigantic Turkana, the wiry, stunted Andorobo, the Apollo-like Masai, the naked Nile tribes, and the scrupulously clothed Baganda. These last again are enthusiastic, casuistic Christians, while other tribes of the Nile Province are fanatical Muhammadans. The Bahima are, or were, ardent believers in witchcraft; the Basoga polytheists are burdened with a multiplicity of minor deities, while the Masai and kindred races have practically no religion at all. Cannibalism lingers in the western corners of the Protectorate; while the natives of other parts are importing tinned apricots, or are printing and publishing in their own language summaries of their past history. This is the country of the okapi, the whale-headed stork, the chimpanzee and the five-horned giraffe, the rhinoceroses with the longest horns, and the elephants with the biggest tusks.

Whatever drawbacks may be found in the Uganda Protectorate from the white man's point of view, monotony or lack of interest is not among them. The book which follows this Preface is an imperfect attempt on my part to give those who have not yet visited Uganda some idea of what is to be seen there, and to place before them a collection of all the information which I have been able to obtain personally or through the co-operation of friends and colleagues as to the geology and biology, the anthropology, languages, and habits and customs of the many diverse tribes of the Protectorate (whose characteristics are fast being blurred and overlaid by the rapid invasion of the country from the east coast, and the gradual unification of speech and culture which the united efforts of Europeans, educated black men, and Indians are producing). I have spent twenty months in this Protectorate. It has been, of course, physically impossible to visit every part of it, and there are some portions even yet that have never been examined by a European. But where I could not go myself I

sought information from others who had visited places and countries I did not reach. Therefore this book is in many ways similar to the work which I published on British Central Africa in 1897. In that, as in this, I have to acknowledge with gratitude the help and co-operation of many friends and colleagues who have placed their stores of information at my disposal.

Amongst these names I should select for special mention Mr. C. W. Hobley, Mr. J. F. Cunningham, Mr. George Wilson, C.B., Mr. W. Grant, C.M.G., Major C. Delmé Radcliffe, Mr. F. J. Jackson, C.B., Mr. Alexander Whyte, Lieutenant Mundy, Lieutenant-Colonel J. Evatt, D.S.O., Major Gorges, Dr. Henry Bödeker, Colonel A. H. Coles, D.S.O., Mr. Harold Baker, Mr. F. W. Isaac, Captain W. Rumbold, Mr. J. Foaker, Mr. S. S. Bagge, Dr. R. U. Moffat, C.M.G., Mr. F. Spire, Mr. C. W. Fowler, C.M.G., R.N., Mr. F. Pordage, Mr. James Martin, Mr. R. Racey, and the late Major Sitwell and Mr. R. Baile. I also have to acknowledge the receipt of much interesting and detailed information at different times from the Right Rev. Alfred Tucker, Bishop of Uganda: Monseigneur Henri Streicher, Apostolic Vicar of the Victoria Nyanza; and the Right Rev. Henry Hanlon, Apostolic Vicar of the Upper Nile; from the Rev. A. B. Fisher, the Rev. H. Madocks, and the Rev. G. Baskerville, of the Church Missionary Society. It is with pleasure also that I note my indebtedness for much interesting information about native customs, history, and languages, to Apolo Kagwa and Paul Mukwenda, highly placed native officials in the Kingdom of Uganda; to Josia Majoje, Government interpreter, and to Kasagama, king of Toro, and his excellent minister, the Kimbugwe.

I have also to thank that accomplished traveller and sportsman, Mr. Edward North Buxton, for his kindness in placing at my disposal his magnificent collection of photographs taken along the banks of the Upper Nile. I have not been able to utilise these in this book as fully as I should have liked (having regard to their artistic value), because most of the scenes and animals they illustrate lay beyond the province of this Protectorate, but such as I have used are a valuable addition to the book.

Mr. Ernest Gedge has very kindly lent me four of his photographs illustrating the summit and interior of the crater of Mount Elgon.

The thanks of my brother anthropologists (as well as my own acknowledgments) are due to Dr. Frank C. Shrubsall for the appendices he has furnished to Chapter XIII. on the anthropometric observations, and to Chapter XIV. on a Pygmy's skeleton. My book has furthermore been rendered useful—I might almost say, valuable—by the list of plants drawn up by Mr. Wright, of the Royal Gardens, Kew, under the direction of Sir William Thiselton Dyer, K.C.M.G.; and by the lists of mammals, birds, reptiles, fishes, insects, etc., very kindly supplied by the officials of the Natural History Museum (Messrs. Oldfield Thomas, Bowdler Sharpe, Charles Chubb, G. A. Boulenger, Edgar Smith, F. Jeffrey Bell, R. Pocock, A. Butler, C. Waterhouse, C. Gahan, Ernest Austen, W. F. Kirby, and R. Kirkpatrick), under the direction of Professor E. Ray Lankester. Messrs. L. Fletcher and G. T. Prior, of the same Department, have reported on the geological and mineralogical collections. Dr. P. L. Sclater, Secretary of the Zoological Society, not only selected Mr. Doggett to accompany my expedition, but constantly assisted me with his valuable advice in the matter of making collections. Sir Thomas Sanderson and Sir Clement Hill, of the Foreign Office, have kindly corrected the chapters on history and the Special Commission. The authorities of the Uganda Railway and Mr. D. J. Wilson, of Mombasa, should be thanked for the care they took to transport safely to England all my scientific collections.

I must close this enumeration with a special acknowledgment of the services rendered to me by Mr. W. G. Doggett, whom I engaged originally to accompany me as a taxidermist and photographer, and who is now in the service of the Scientific Department of the Uganda Administration. A large number among the best of the photographs which illustrate this book, and several of the drawings, are the work of Mr. Doggett.

CONTENTS OF VOL. I

CHAPTER I

PAGE

"What the Country looks like"—The Eastern Province and the Rudolf Basin 1

CHAPTER II

The Central Province and the Victoria Nyanza 43

CHAPTER III

The Kingdom of Uganda 85

CHAPTER IV

The Western Province and the Nile 122

CHAPTER V

Ruwenzori and its Snows 152

CHAPTER VI

The Semliki Valley and the Congo Forest 190

CHAPTER VII

History of the Protectorate Territories 209

CHAPTER VIII

PAGE

THE WORK OF THE SPECIAL COMMISSION, ETC. 248

CHAPTER IX

COMMERCIAL PROSPECTS 277

CHAPTER X

METEOROLOGY AND GEOLOGY 300

CHAPTER XI

BOTANY—Appendix: List of Flora of Uganda Protectorate 313

CHAPTER XII

ZOOLOGY—Appendices: Lists of Fauna (mammals, birds, reptiles, fishes, land shells, butterflies, beetles, orthoptera, spiders, polyzoa, etc., etc.) . 352

COLOURED ILLUSTRATIONS IN VOL. I

NO.	TITLE.	SOURCE.				
1.	The Okapi (*Okapia johnstoni*).	*Painting by the Author*				Frontispiece.
2.	A chat of Lake Naivasha in courting attitude	,,	,,	,,	*To face p.*	10
3.	Flamingoes on Lake Hannington (*Phœniconais minor*)	,,	,,	,,	,,	16
4.	The five-horned giraffe	,,	,,	,,	,,	25
5.	Jackson's hartebeest	,,	,,	,,	,,	27
6.	Grant's gazelle	,,	,,	,,	,,	40
7.	*Acanthus arboreus*	,,	,,	,,	,,	46
8.	*Columba guinea*: a common pigeon on Mount Elgon	,,	,,	,,	,,	58
9.	A view north of Mount Elgon, towards Karamojo: thunderstorm sweeping up	,,	,,	,,	,,	61
10.	*Spathodea nilotica*	,,	,,	,,	,,	68
11.	*Schizorhis zonura*	,,	,,	,,	,,	74
12.	"Summer isles of Eden set in dark purple spheres of sea" (the Sese Islands)	,,	,,	,,	,,	79
13.	The whale-headed stork at home	,,	,,	,,	,,	84
14.	"Death"—the Gaboon puff-adder (*Bitis gabonica*)	,,	,,	,,	,,	94
15.	A landscape in Uganda (Bwekula)	,,	,,	,,	,,	106
16.	A causeway through swampy forest, Uganda	,,	,,	,,	,,	110
17.	*Erythrina tomentosa*: the ekirikiti tree	,,	,,	,,	,,	116
18.	Violet plantain-eaters at play	,,	,,	,,	,,	119
19.	A crater lake, Ankole	,,	,,	,,	,,	124
20.	Pygmy geese (*Nettopus*)	,,	,,	,,	,,	128
21.	A landscape in Western Uganda; showing flowers of *Emilia*	,,	,,	,,	,,	139
22.	Bateleur eagle striking a young jackal	,,	,,	,,	,,	141
23.	*Balæniceps rex* (the whale-headed stork)	,,	,,	,,	,,	144
24.	Duwoni peak (Ruwenzori) at dawn	,,	,,	,,	,,	158
25.	Kiyanja peak of Ruwenzori, from the Mubuko Valley: mid-day	,,	,,	,,	,,	176
26.	*Gallirex johnstoni*: the turaco of Ruwenzori	,,	,,	,,	,,	187
27.	Crimson-breasted barbets	,,	,,	,,	,,	189
28.	Head of the Semliki waterbuck (*Cobus defassa*)	,,	,,	,,	,,	192
29.	The large genet of the Semliki Forest (*Genetta victoriæ*)	,,	,,	,,	,,	206
30.	A landscape on the Mau Plateau	,,	,,	,,	,,	299
31.	Sunflowers in Uganda	,,	,,	,,	,,	319
32.	*Colobus occidentalis*: the common colobus monkey of Central Africa	,,	,,	,,	,,	362

NO.	TITLE.	SOURCE.	
33.	The white-nosed *Cercopithecus* monkey of Uganda	*Painting by the Author.*	*To face p.* 364
34.	The serval cat	,, ,, ,, ,,	367
35.	A jackal of Uganda	,, ,, ,, ,,	368
36.	*Gazella thomsoni*	,, ,, ,, ,,	390
37.	The king of the widow finches (*Chera*)	,, ,, ,, ,,	397
38.	Widow birds and bishop finches (*Penthetria* and *Pyromelana*): grass-lands, Eastern Province	,, ,, ,, ,,	399
39.	The great blue plantain-eater (*Corythæola cristata*)	,, ,, ,, ,,	401
40.	"Happy dreams": a sleeping crocodile	,, ,, ,, ,,	406
41.	A *Nephila* spider from Toro: half natural size	*Painting by Mr. Doggett* ,,	410
42.	The "King of the Sparrows" (*Dinemellia*)	*Painting by the Author* ,,	443

MAPS IN VOL. I

NO.	TITLE.	
1.	Uganda Protectorate, showing administrative divisions	*To face p.* 1
2.	Uganda Protectorate; general orographical features and salubrity	,, 209
3.	Sketch-maps showing our knowledge of the equatorial lakes according to different travellers at different periods	,, 222
4.	Uganda Protectorate; density of native population and European settlements	,, 248
5.	Uganda Protectorate; prevailing religions and forms of belief	,, 276
6.	Uganda Protectorate; distribution of rainfall and navigable waterways	,, 302
7.	General distribution and range of vegetation	,, 312

BLACK AND WHITE ILLUSTRATIONS IN VOL. I

NO.	TITLE.	SOURCE.	PAGE
1.	Andorobo devouring raw a dead waterbuck	*Photograph by Mr. Doggett*	3
2.	An Andorobo drinking as primitive man drank	" " "	4
3.	"Many little isolated craters"	*Photograph by the Author*	5
4.	Steam rising from volcanic cracks, El Burro	" " "	6
5.	Steam rising from fissure, El Burro	" " "	7
6.	Cliffs and boulders on north shore of Lake Naivasha	" " "	8
7.	Lake Naivasha, eastern shore	" " "	9
8.	North-east corner of Lake Naivasha	" " "	10
9.	Lake Nakuro, from the north-west	" " "	11
10.	Lake Hannington and its flamingoes	" " "	12
11.	Dead trees standing far out in the water of Lake Hannington	" " "	13
12.	Flamingoes' nests, Lake Hannington	" " "	14
13.	"Half a million of flamingoes:" north end of Lake Hannington	" " "	15
14.	The south-east corner of Lake Baringo	" " "	17
15.	Acacia-trees, near Baringo	" " "	18
16.	Cliffs near the south-west corner of Baringo	" " "	19
17.	Strange termite ("ant") hills found throughout the Baringo and Rudolf regions	" " "	21
18.	Lake Baringo, from the western shore	*Drawing by the Author, from Photograph by Mr. H. H. Baker.*	22
19.	Juniper-trees, Nandi Plateau	*Photograph by the Author*	24
20.	Grass on the Gwas' Ngishu Plateau	" " "	25
21.	Cutting up game, Gwas' Ngishu Plateau	" " "	27
22.	On the Nandi Plateau, looking towards Lumbwa	" " "	28
23.	Bamboo forest behind Eldama Ravine	" " "	29
24.	Bamboo forest, Nandi Road, 9,000 feet	" " "	30
25.	Bamboo forest, Nandi Road, 9,000 feet	" " "	31
26.	A cascade at the Ravine station	" " "	32
27.	Near the Mau summit, Uganda Railway	" " "	33
28.	Mount Londiani, Nandi Plateau (8,000 feet)	" " "	34
29.	"Many a lovely bower"	" " "	35
30.	Wild bananas (*Musa ensete*)	" " "	36
31.	On Kavirondo Bay, Victoria Nyanza	*Photograph by Colonel A. H. Coles.*	37
32.	In the Nandi Forest	*Photograph by the Author*	38
33.	In the Nandi Forest	" " "	39
34.	"The Kavirondo before they wore trousers"	" " "	41
35.	Crossing the Nzoia River	" " "	44
36.	Forest on the south-western foot-hills of Mount Elgon	" " "	45
7.	Vegetation, 6,000 feet, Mount Elgon	" " "	46

NO.	TITLE.	SOURCE.	PAGE
38.	Large white balsam on Mount Elgon	*Photograph by the Author*	47
39.	Entrance to cave, South Elgon	,, ,, ,,	48
40.	Thomson Falls, River Sasuru, screening mouth of cave: South Elgon	,, ,, ,,	49
41.	House inside cave, South Elgon	,, ,, ,,	50
42.	Wall of cave-house	,, ,, ,,	51
43.	Entrance to cave partially closed with sticks and stones	,, ,, ,,	52
44.	"Tremendous buttresses and precipitous cliffs"	,, ,, ,,	53
45.	Masaba village, West Elgon	,, ,, ,,	54
46.	Cascade, "Osborne" Falls, North Elgon	,, ,, ,,	55
47.	Crossing West Elgon rivers	,, ,, ,,	56
48.	Crater wall of Elgon, seen from the west	,, ,, ,,	57
49.	Edge of crater wall, Elgon, from the east (over 13,000 feet)	*Photograph by Mr. Ernest Gedge.*	58
50.	The highest point of the crater rim (14,200 feet)	,, ,, ,,	59
51.	The Jackson-Gedge Expedition on the top of Mount Elgon	,, ,, ,,	60
52.	The descent to the central crater of Elgon (from a point on the rim about 13,500 feet in altitude). Shows tree groundsels and other Alpine vegetation	,, ,, ,,	61
53.	A distant view of Mount Debasien (from north-east Elgon), with Sūk pyramidal hills in foreground	*Photograph by the Author*	62
54.	Looking towards the plains of Bukedi from western slopes of Elgon	,, ,, ,,	63
55.	"Elgumi people clustering on ant-hills"	,, ,, ,,	64
56.	A lane in Busoga	,, ,, ,,	65
57.	"The Birth of the Nile" (Ripon Falls)	*A Drawing by the Author*	67
58.	Napoleon Gulf (looking south) and the "row of white fangs" (an ancient rocky barrier)	,, ,, ,,	69
59.	The Ripon Falls at the birth of the Nile	*Photograph by the Author*	70
60.	The Ripon Falls	,, ,, ,,	71
61.	The Ripon Falls, from Bugungu	,, ,, ,,	72
62.	The Ripon Falls, from Bugungu	,, ,, ,,	73
63.	Forest on the shores of an island	,, ,, ,,	74
64.	Coast of the main island, Sese	,, ,, ,,	75
65.	Natives of the Sese Islands	,, ,, ,,	76
66.	Speke's tragelaph (*Limnotragus spekei*)	,, ,, ,,	77
67.	A creek on the Victoria Nyanza	,, ,, ,,	78
68.	Ambatch-trees (in foreground)	,, ,, ,,	79
69.	Water-lilies, Victoria Nyanza	,, ,, ,,	80
70.	Yellow water-lily on the Victoria Nyanza	,, ,, ,,	81
71.	The great Victoria Nyanza	*A Drawing by the Author*	83
72.	Marsh in Uganda (with native causeway)	*Photograph by the Author*	86
73.	Forest by the shores of the Victoria Nyanza	,, ,, ,,	87
74.	Forest in Uganda	,, ,, ,,	88
75.	The lianas of the rubber vines, Uganda forest	,, ,, ,,	89
76.	*Erythrina* tree in blossom	,, ,, ,,	90
77.	Dracænas, Uganda forest	,, ,, ,,	91
78.	Wild banana, Uganda forest	,, ,, ,,	92
79.	Raphia palms, Uganda forest	,, ,, ,,	93
80.	Raphia palms, Uganda forest	,, ,, ,,	95
81.	Wild date palms (*Phœnix spinosa?*), Uganda	,, ,, ,,	96
82.	The banana of Uganda (one of the thirty odd varieties)	,, ,, ,,	97

NO.	TITLE.	SOURCE.	PAGE
83.	A banana plantation	*Photograph by the Author*	99
84.	"Happy Uganda!"	,, ,, ,,	100
85.	Reed fences in an Uganda town	,, ,, ,,	101
86.	Kampala (a suburb of Mengo)	,, ,, ,,	102
87.	Grass . . . in Uganda!	,, ,, ,,	103
88.	Causeway or bridge, Uganda	,, ,, ,,	105
89.	Papyrus in an Uganda marsh	,, ,, ,,	107
90.	Flowers on the edge of an Uganda swamp	,, ,, ,,	109
91.	In a swamp forest, Uganda	,, ,, ,,	110
92.	Tea on the road, Uganda	,, ,, ,,	111
93.	A present of food, Uganda	,, ,, ,,	113
94.	A band of music, Uganda	,, ,, ,,	115
95.	In Buddu	,, ,, ,,	117
96.	A path in the Botanical Gardens, Entebbe	,, ,, ,,	119
97.	In Ankole	,, ,, ,,	122
98.	A crater lake	,, ,, ,,	123
99.	A crater lake	,, ,, ,,	124
100.	A corner of a crater lake	,, ,, ,,	125
101.	Lake Albert Edward, from Katwe (Katwe Gulf)	,, ,, ,,	126
102.	Lake Albert Edward, Katwe Gulf (*note* the candelabra euphorbias)	,, ,, ,,	127
103.	The salt lake at Katwe	,, ,, ,,	128
104.	The Kafuru Strait between Lakes Albert Edward and Dweru	,, ,, ,,	129
105.	"The Mpanga looks very like a mountain stream in Scotland"	,, ,, ,,	130
106.	*Pandanus* on the Durra River	,, ,, ,,	131
107.	In the Mpanga Forest, Toro	,, ,, ,,	132
108.	In the Mpanga Forest, Toro	,, ,, ,,	133
109.	The *Borassus* palm, South Toro	,, ,, ,,	135
110.	In Eastern Toro	,, ,, ,,	136
111.	On a Toro river	,, ,, ,,	137
112.	A mountain stream (the Ruimi)	,, ,, ,,	138
113.	On the banks of the Ruimi, Central Toro	,, ,, ,,	139
114.	Country with *Borassus* palms at the south end of Lake Albert	*Photograph by the late Major Sitwell.*	140
115.	"White-eared cobus antelopes" on the Nile	*Photograph by Mr. E. N. Buxton.*	141
116.	Marabou storks on the Nile	,, ,, ,,	142
117.	On the Nile below Gondokoro	,, ,, ,,	143
118.	Saddle-billed storks on the Nile	,, ,, ,,	145
119.	Bastard hartebeest on Nile banks	,, ,, ,,	147
120.	Sudd on the Nile	,, ,, ,,	148
121.	Floating islands and water-lilies on the Nile	*Photograph by Mr. Doggett*	149
122.	The ambatch-tree	,, ,, ,,	151
123.	A general view of the Ruwenzori range from an imaginary standpoint thirty miles due east	*A Drawing by the Author*	153
124.	A bit of Ruwenzori, from the Semliki Valley on the west	*Photograph by the Author*	154
125.	Author in "climbing" costume, clothed to resist cold on Ruwenzori	*Photograph by Mr. Doggett*	155
126.	Dracænas on Ruwenzori (6,000 feet)	*Photograph by the Author*	156
127.	Tree-ferns on Ruwenzori at 7,000 feet	,, ,, ,,	157
128.	*Podocarpus* on Ruwenzori (7,500 feet)	,, ,, ,,	158
129.	*Hypericum* and ferns, Ruwenzori (10,000 feet)	,, ,, ,,	159

NO.	TITLE.	SOURCE.	PAGE
130.	A giant groundsel (*Senecio johnstoni*) at an altitude of 12,500 feet	*Photograph by the Author*	160
131.	*Lobelia stuhlmanni*	" " "	161
132.	*Lobelia deckeni*	" " "	162
133.	Details of flowers and section of stalk-column of *Lobelia deckeni*	*A Drawing by the Author*	163
134.	*Senecio johnstoni* hung with *Usnea* lichen	*Photograph by the Author*	164
135.	Mosses covering trunks of tree-heaths, Ruwenzori (11,000 feet)	" " "	165
136.	Moss covering tree-trunks at 11,500 feet	" " "	166
137.	Ruwenzori, 11,500 feet: *Lobelia stuhlmanni* (growing in foreground like a dracæna) and tree-heaths	" " "	167
138.	A hot spring, eastern side of Ruwenzori, close to Ruimi River, at 5,500 feet	" " "	168
139.	Vegetation (lobelias and senecios) on Ruwenzori at 8,500 feet (Mubuko Valley)	" " "	169
140.	"A most arduous climb": our way up the mountain over tree-trunks at 10,000 feet	" " "	170
141.	A rock shelter, Ruwenzori (Buamba camp, 11,500 feet)	" " "	171
142.	"A beautiful swampy garden": Upper Mubuko Valley at 11,000 feet	" " "	172
143.	*Lobelia deckeni*, senecios, tree-heaths, and everlasting flowers in Upper Mubuko Valley at 11,300 feet	" " "	173
144.	Waterfall at Buamba camp	" " "	174
145.	View of Kiyanja peak from Upper Mubuko Valley at 11,300 feet	" " "	176
146.	View of Kiyanja peak from Buamba camp, 11,500 feet (the trees are arboreal heaths)	" " "	177
147.	"Blackberries on Ruwenzori": the fruit of *Rubus doggetti*, 12,500 feet	" " "	178
148.	The snow-fields of Ruwenzori between Kiyanja and Duwoni peaks, seen from the rock shelter at 12,500 feet	" " "	179
149.	The base of the Mubuko glacier (13,000 feet)	" " "	180
150.	"Ice and snow under the equator": the Mubuko glacier at 13,500 feet	" " "	181
151.	On the ice of the Mubuko glacier (13,534 feet)	" " "	183
152.	An ice cavern, Mubuko glacier (13,534 feet)	" " "	185
153.	The ice melting: source of the Mubuko River (13,534 feet)	" " "	186
154.	The upper part of the Mubuko glacier near the southern base of Duwoni peak	" " "	187
155.	Tropical forest and hot spring, north-west flanks of Ruwenzori (the natives are Baamba)	*Photograph by the late Major Sitwell.*	188
156.	A *Borassus* palm, Semliki Valley	*Photograph by the Author*	191
157.	Waterbuck of Upper Semliki Valley	" " "	193
158.	The Semliki River opposite Fort Mbeni	" " "	194
159.	The Middle Semliki near the southern edge of the great Semliki (Congo) Forest	" " "	195
160.	In the Congo Forest: a clearing near Lupánzula's	" " "	197
161.	Path through Congo Forest near Lupánzula's	" " "	199
162.	In the Congo Forest, north-west of Mbeni: an Mbuba clearing	" " "	200
163.	In the Congo Forest	" " "	201
164.	A stream in the forest depths where we saw footprints of the okapi	" " "	203

NO.	TITLE.	SOURCE.	PAGE
165.	An affluent of the Semliki, Congo Forest	*Photograph by the Author*	204
166.	The Semliki in the grass-lands immediately south of Lake Albert Nyanza	,, ,, ,,	205
167.	A chimpanzee of the Congo Forest	,, ,, ,,	206
168.	Young male elephant killed in Ruaharu gorge	,, ,, ,,	207
169.	Blue beads in a Ja-luo's ear, Kavirondo	*A Drawing by the Author*	209
170.	A Muhima	*Photograph by the Author*	211
171.	A Hima ox	*A Drawing by the Author*	213
172.	A Maskat Arab trader in Uganda	*Photograph by the Author*	215
173.	An Arab trader in Uganda	,, ,, ,,	217
174.	A Swahili (Zanzibari) trader in Uganda	,, ,, ,,	225
175.	Chief Luba (of Busoga), the executioner of Bishop Hannington. (Luba is the seated figure; the other two are his son and, in the background, one of the Sudanese ex-mutineers who revolted at Luba's Fort in 1897)	,, ,, ,,	229
176.	Ex-king Kabarega in the custody of an Uganda chief, the Kakúngulu (after his capture by Lieutenant-Colonel Evatt in 1899; Kabarega is the seated figure with bandages on his arms)	*Photograph by Captain Chitty, I.S.C.*	235
177.	Sudanese soldiers: kit inspection	*Photograph by the Author*	237
178.	A loyal Sudanese native officer: Rehan Effendi	*Photograph by the late Major Sitwell.*	239
179.	A Sudanese soldier (author's orderly, Sergeant Fadl al Mallah, a native of the Logbwari country, and 6 feet 3 inches tall)	*Photograph by Mr. Doggett*	240
180.	Tree outside Luba's (now Fort Thruston) under which Major Thruston was killed by the mutineers	*Photograph by the Author*	241
181.	Steam-launch *Victoria* (now plying again on the Nyanza)	,, ,, ,,	242
182.	Mr. F. J. Jackson, C.B.	,, ,, ,,	243
183.	Mwanga, ex-king of Uganda (the figure on the right-hand side), in charge of an Uganda native officer, Andrea	*Photograph by Captain Chitty, I.S.C.*	245
184.	Daudi Chua, infant king of Uganda, with his two sisters (the figure on the right is Muywanya, one of the regents)	*Photograph by Mr. Doggett*	246
185.	Mr. W. G. Doggett, naturalist on the Special Commissioner's staff, engaged in measuring a Muamba Negro	*Photograph by the Author*	249
186.	Ali Kiongwe, the author's Swahili "head-man"	,, ,, ,,	250
187.	The author's Somali "major-domo," Ahmad bin Warfa	,, ,, ,,	251
188.	The little king of Uganda	,, ,, ,,	253
189.	The king of Uganda inspecting his Indian guard of honour	,, ,, ,,	254
190.	Hoima, the new capital of Unyoro, established in 1900 by Mr. George Wilson, C.B.	*Photograph by Mr. George Wilson.*	255
191.	A bungalow at Hoima	,, ,, ,,	256
192.	"Government House" at Hoima, Unyoro, in process of building	,, ,, ,,	257
193.	The temporary residence of the collector for the Unyoro District	,, ,, ,,	258
194.	The author's bungalow ("Commissioner's House") at Entebbe, built by Mr. Spire	,, ,, ,,	259
195.	A luncheon at Entebbe on the late Queen's birthday	,, ,, ,,	261

NO.	TITLE.	SOURCE.	PAGE
196.	The first bow window in Entebbe	*Photograph by Mr. George Wilson.*	262
197.	In the author's sitting-room at Entebbe	,, ,, ,,	263
198.	The author's study at Entebbe	*Photograph by Mr. Doggett*	264
199.	The author's dining-room at Entebbe	,, ,, ,,	265
200.	The SS. *William Mackinnon*	,, ,, ,,	269
201.	On the deck of the *William Mackinnon*	,, ,, ,,	271
202.	The *William Mackinnon* and the Government dau *Winifred* at Entebbe	*Photograph by Colonel A. H. Coles.*	273
203.	A missionary's house, Uganda	*Photograph by the Author*	275
204.	"Companions in captivity": young elephant and zebra at Entebbe	*Photograph by Mr. Doggett*	287
205.	A sunflower with nearly 300 blossoms on it at Entebbe	,, ,, ,,	291
206.	A rubber-tree (*Tabernæmontana*)	*Photograph by the Author*	295
207.	The White Man's Country: Nandi Plateau, Eastern Province	,, ,, ,,	297
208.	Flat-topped acacia (growing at about 6,000 feet under the equator), very characteristic of the hilly Central African regions	,, ,, ,,	313
209.	Curious fungus common in forest regions	*A Drawing by the Author*	314
210.	A *Podocarpus* (yew) tree on Nandi Plateau	*Photograph by the Author*	315
211.	Junipers on Mount Elgon	,, ,, ,,	316
212.	Lobelias (*L. stuhlmanni?*) and kniphofias growing at 10,000 feet on Nandi Plateau	,, ,, ,,	317
213.	*Erythrina tomentosa* (akin to the "Kaffir Boom" of South Africa)	,, ,, ,,	318
214.	*Crinum* lily	,, ,, ,,	319
215.	Raphia palm of Uganda, fruiting	,, ,, ,,	320
216.	Cycads' mode of growth in Toro	,, ,, ,,	321
217.	The cone of a cycad	,, ,, ,,	322
218.	*Pandanus*, or screw pine	,, ,, ,,	323
219.	Papyrus in blossom	,, ,, ,,	351
220.	The zebra of the Elgon District: Grant's zebra (*Equus burchelli granti?*)	,, ,, ,,	354
221.	A male chimpanzee	,, ,, ,,	356
222.	Head of chimpanzee from Toro	,, ,, ,,	358
223.	Eleanor and her nurse (a female *Doguera* baboon from the Semliki Forest)	,, ,, ,,	360
224.	Two baby baboons (*Papio doguera?*) from the Rift Valley	,, ,, ,,	361
225.	The red colobus from Toro (*Colobus rufomitratus*)	,, ,, ,,	363
226.	The Cape jumping hare (a clumsy jerboa): *Pedetes caffer*	*A Drawing by the Author*	369
227.	Young elephant and zebra at Entebbe	*Photograph by the Author*	370
228.	A young zebra	,, ,, ,,	371
229.	A male rhinoceros (*Diceros bicornis*)	,, ,, ,,	373
230.	Young Grant's zebra, Uganda	,, ,, ,,	374
231.	Young male of five-horned giraffe	,, ,, ,,	376
232.	Old male of five-horned giraffe	,, ,, ,,	378
233.	Female of Uganda five-horned giraffe (the female has only three horns)	,, ,, ,,	379
234.	Head of the okapi	,, ,, ,,	381
235.	A cow of the Ankole (Hima) breed of cattle (the cows have usually longer horns than the bulls)	,, ,, ,,	385

NO.	TITLE.	SOURCE.	PAGE
236.	The common duyker antelope of East and South-East Africa (*Cephalophus grimmi*)	*Photograph by the Author*	386
237.	A steinbuck (*Raphicerus*) of the Eastern Province of the Uganda Protectorate	*A Drawing by the Author*	387
238.	Horns of *Cobus defassa* (?) from the Semliki Valley	*Photograph by the Author*	388
239	Thomas's kob (*Cobus thomasi*)	*A Drawing by the Author*	389
240.	White-eared kob (*Cobus leucotis*)	*Photograph by Mr. E. N. Buxton.*	390
241.	Baker's roan antelope (*Hippotragus bakeri*)	,, ,, ,,	391
242.	A pallah antelope (Baringo)	*Photograph by the Author*	392
243.	Heads of Coke's hartebeest (*Bubalis cokei*)	,, ,, ,,	393
244.	Speke's tragelaph (*Limnotragus spekei*)	,, ,, ,,	394
245.	Feet of *Limnotragus spekei*	*A Drawing by the Author*	395
246.	Female of Grant's gazelle	*Photograph by the Author*	396
247.	*Heterocorax capensis*	*A Drawing by the Author*	398
248.	*Rhinocorax affinis* (the slender-billed crow of Nandi)	,, ,, ,,	399
249.	The ostrich of the northern parts of the Uganda Protectorate (*Struthio camelus*)	,, ,, ,,	405
250.	A new chameleon from Ruwenzori (*Chamæleon johnstoni*)	*From a Lithograph Drawing by Mr. F. G. Smit**	407
251.	Another new chameleon from Ruwenzori (*C. xenorhinus*)	,, ,, ,,	408
252.	A mantis insect	*A Drawing by Mr. Doggett*	412
253.	A brace of whale-headed storks	*Photograph by the Author*	444

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ORTHOGRAPHY

THE orthography of native words and names used throughout this book (except in the vocabularies) is that of the Royal Geographical Society. All the consonants are pronounced as in English (except "ñ," which stands for the nasal consonant in "ri*ngin*g," "ba*ng*"), and the vowels as in Italian.

PREFATORY CHAPTER TO SECOND EDITION

HORNS OF MALE SPEKE'S TRAGELAPH
(*LIMNOTRAGUS SPEKEI*)

SINCE the First Edition of "The Uganda Protectorate" was produced in 1902 there have been certain changes, developments, and additions to our knowledge which it is necessary to record in a Second Edition of this work. In order not to disturb the original form of the book, it has been considered preferable to print this additional matter separately.

The Uganda Protectorate still remains a separate entity, and no further steps have as yet been taken towards the fusion of its administration with that of the adjoining Protectorate of British East Africa, though it is possible that progress in this direction may be made when both Protectorates are transferred from the control of the Foreign Office to that of the Colonial Office in 1905. But since the First Edition of this book was published the Eastern Province of the Uganda Protectorate (as it was formerly designated) has been transferred to the Administration of the East African Protectorate under the somewhat inappropriate name of Kisumu. Kisumu is the name of a small and not very important station on the north-east corner of Kavirondo Bay. A more distinctive name for this very important administrative division would have been "Nandi," or "Naivasha," or "Baringo." Considering the important part that the healthy and extensive Nandi Plateau will probably take in future East African developments, it is to be hoped that whilst matters are still in a plastic condition, the descriptive name of Nandi may be applied to the administrative division which was formerly known as the Eastern Province of the Uganda Protectorate. The transference of this province brings the territory of the British East Africa Protectorate to the eastern shores of the Victoria Nyanza, and therefore includes within the limits of that administration the whole present course of the Uganda Railway.

The management of the railway has been, or is about to be, handed over to the Administration of British East Africa, being thus removed from the direct control and management of a railway board sitting at the Foreign Office. Such a change was of course inevitable soon after the completion of the line.

In other respects the territory covered by the Uganda Protectorate has not materially altered since the first publication of this book, so far as any definite settlement with other Powers is concerned. The result of the Anglo-German-Congolese Boundary Commission has given somewhat more of the course of the River Kagera to the Uganda Protectorate, but is said to exclude that Protectorate from any portion of the coast of Lake Albert Edward or of the Ruwenzori range. As the participation in the waters of Lake Albert Edward and in the Ruwenzori Mountains was clearly intended by the original 1894 Delimitation Treaty between the Congo Free State and Great Britain, it is probable that some settlement may be arrived at by which the very stupid selection of a degree of longitude as a frontier may be replaced by definite territorial features such as the thalweg of Lake Albert Edward, and of the Semliki River down to its entrance into Lake Albert. Any immediate chance of agreement, however, in this direction is rendered difficult by the strained situation which has arisen between Great Britain and the King of the Belgians in regard to his leaseholds on the Upper Nile in what is known as the Lado Enclave and the Bahr-al-Ghazal region, the Anglo-Egyptian Sudan Government strongly objecting to the continuance of these leases; while the action of the concessionnaire companies in other parts of the Congo Free State has made Great Britain extremely unwilling to hand over any fresh territories to the Government of a state which has so far been a disappointment if regarded from that point of view of international philanthropy from which it was founded. It is only right, however, to point out whilst this question is being discussed that so far Congolese (Belgian) Government to the immediate west of Lake Albert and in the Ituri Province, which adjoins the western part of Uganda, has been considered praiseworthy by British officials, missionaries, and travellers.

Since "The Uganda Protectorate" was first published a valuable addition to our knowledge of the peoples of the Kavirondo country and what is now styled the Kisumu Province of the East African Protectorate has been made by Mr. C. W. Hobley, C.M.G., Sub-Commissioner for that province. His work has been published in different instalments by the Anthropological Institute, 3, Hanover Square, W. Another work, dealing chiefly with the western portion of the Uganda

Protectorate (Baganda, Bahima, Banyoro, etc.) has been written and copiously illustrated by Mr. J. F. Cunningham, Secretary of the Uganda Administration. This work, which will be published by Messrs. Hutchinson, may be taken together with that of Mr. C. W. Hobley as valuable supplementary accounts of the human races in this part of Eastern Equatorial Africa. On account of the publication of these two books I have not thought it necessary to add to the information I have given already regarding human races and languages in the First Edition of "The Uganda Protectorate." My attention has not been called to any errors in this section of my own work which it

SLEEPING SICKNESS PATIENTS AT ENTEBBE HOSPITAL

is necessary to correct. Additional works on the Bantu languages (especially of the Elgon district and of Unyoro and Toro) have been published by the Church Missionary Society.

With regard to our knowledge of the mammals of the Uganda Protectorate and the adjoining regions, I have to record briefly the following additional information: At the time when the First Edition of this work appeared nothing more was known of the Okapi (*Ocapia johnstoni*) than what had been given in the treatise on that newly discovered ruminant by Professor E. Ray Lankester. But later in the year 1902 and during 1903 some six specimens of okapis were received from the north-eastern territories of the Congo Free State, and these additional examples brought several new facts to light.

They would seem to establish the existence of two species or races of okapi, one decidedly smaller than the other; while they show that the male okapi possesses "horns." Regarding the female, it is not altogether clear whether she is hornless in both the large and the small type. In the complete specimen which I obtained under the circumstances related in the First Edition, and which was presented by me to the British Museum, the only indications of "horns" are slight protuberances on the skull, a little behind the eye orbits, and a roughness or protuberance just below the eyes on the nasal ridge. These thickenings or protuberances of the bones correspond with special arrangements of the hair on the skin, and the little twirls or ridges thus give a faint suggestion of prominences. In the adult male okapi the "ossicusps" (as Professor Ray Lankester terms the separate growth of bone which constitutes the "horn" in the giraffe and the okapi) are quite three inches in length in some specimens. They would seem to be covered with hair for about two and a half inches of their length, leaving a bare, bony projection (rather sharp) about half an inch long. It is not quite certain that the female okapis of both varieties are quite hornless, though this is certainly the fact as regards the large female presented by me to the British Museum. In this last instance it has been shown that the animal was immature at the time of its death, and that it might therefore when mature have grown to an even larger size. On the other hand, amongst the succeeding specimens sent home from the north-eastern part of the Congo Free State adult females were quite one-third smaller than the specimen in the British Museum. There would also appear to be either considerable individual variation in the striping of the hindquarters or else indications that there are at least two varieties or species of okapi in which there is a slightly different arrangement of stripes. These separate types, curiously enough, were already shown in the comparison between (*a*) the separate strips or pieces of skin which I collected from Manyema soldiers or natives in the Ituri Province in August 1900, and (*b*) the complete skin (now in the British Museum) which was obtained for me by Mr. Eriksson, and which according to him was procured at no great distance from Fort Mbeni on the west bank of the Semliki River. Regarding the afore-mentioned separate strips of skin which I collected in 1900, several of these unfortunately were not sent home or did not reach their destination. The strips were originally five in number, and I think I am correct in saying that two were obtained from natives of the Congo Forest about seventeen miles to the north-west of Mbeni, and the other three from Manyema soldiers in the service of the Congo

Free State. These last might, of course, have obtained their strips of skin much farther to the north or west; but although this might account for the existence of two separate species or varieties of the okapi, it would seem from the little that we know, and from the other complete specimens that have come to hand, that either these two varieties or species exist side by side in the Ituri Province or else that there is no clear separation of forms, but simply individual variation in size and markings. Not much additional light has been thrown on the possible range of the okapi at the present day. It has

A DEATH ON THE ROADSIDE FROM SLEEPING SICKNESS

not yet been reported from any district south of the Equator or north of the main stream of the Welle River, or west of the twenty-fourth degree of longitude; but this may simply be due to the fact that all this region of the Congo Free State is still much unexplored. A medical officer of the Government of British Nigeria stated recently that an animal much resembling the okapi had been reported to exist in the forest region near the Upper Benue, and of course subsequent to my own discovery it has been found that other travellers (including the late Dr. Wilhelm Junker) saw strips of the striped okapi skin in the Nyam-Nyam regions, though the matter did not interest them

sufficiently to cause any searching investigation. Undoubtedly the same animal has been mentioned by French Catholic missionaries as "l'antilope zebrée."

It is perhaps scarcely necessary to add that my first surmise as to the character of the okapi was promptly confirmed by Professor Ray Lankester's examination of the skulls and skins which I sent home. It is a member of the Giraffe family, and in its structure perhaps comes nearest to the giraffe—nearer, that is to say, to the giraffe than to that extinct *Helladotherium* with which I originally compared it. In several respects, however, it is more primitive and less differentiated than the giraffe.

In the First Edition I mentioned the "Five-horned" Giraffes, which Mr. Doggett and I had shot to the south-east of Mount Elgon. The specimens I brought home, though they clearly established the extra pair of prominences at the base of the occiput of the skull, were not thought to offer any points of specific value, especially as this additional pair of prominences was found to occur in a less developed form in other skulls of the Northern Giraffe. But since the First Edition of this book was published, through the enterprise and generosity of the Hon. Walter Rothschild and Major Powell Cotton and others the British Museum has become possessed of a magnificent series of giraffes, and it has been deduced by Mr. Richard Lydekker from an examination of this series coupled with other specimens in German museums that the giraffe genus is divisible as follows *:—

Giraffa reticulata: the Somaliland or Netted Giraffe. This animal is sharply distinguished from the other giraffes by its markings. The ground colour of its coat is deep chocolate-red, diversified with a reticulation or network of narrow white lines.

Giraffa camelopardalis (typica): the Blotched Giraffe. The typical form of *Giraffa camelopardalis* is found in Nubia, and perhaps in parts of the Libyan Sahara.

Giraffa camelopardalis antiquorum: the Kordofan Giraffe.

Giraffa camelopardalis cottoni: the South Lado Giraffe.

Giraffa camelopardalis rothschildi: the Baringo Giraffe (with the five ossicusps developed in the male).

Giraffa camelopardalis tippelskirchi: the Kilimanjaro Giraffe.

Giraffa camelopardalis congoensis: the South Congo Giraffe.

Giraffa camelopardalis angolensis: the South Angola Giraffe.

Giraffa camelopardalis wardi: the Northern Transvaal Giraffe.

Giraffa camelopardalis capensis: the Giraffe of Cape Colony.

Giraffa camelopardalis peralta: the Nigerian Giraffe.

* See *P.Z.S.*, 1904, pp. 202-27.

The Cape Giraffe is almost extinct now. The Giraffe of Senegambia (North-West Africa) is not yet placed; it may prove to be an eleventh sub-species of *Giraffa camelopardalis*, or the Blotched Giraffe.

The Five-Horned Giraffe of Baringo and Elgon is *Giraffa camelopardalis rothschildi*. This therefore is the name which should be applied to the giraffe described in the First Edition of "The Uganda Protectorate."

Mr. Oldfield Thomas of the British Museum has been kind enough to supply me with a revised list of the mammalian fauna of the Uganda Protectorate, with additions to our knowledge made since 1902. I should like at the same time to correct two press errors in the list given in the First Edition, where amongst the bats the generic name *Pipistrellus* is wrongly printed as *Pipistullus*, while *Hyæna crocuta* is given as *circuta*.

PRIMATES.

	Authority.
Anthropopithecus troglodytes schweinfurthi, Gigl.	Johnston, Neumann.
Papio doguera, Puch.	Smith, Johnston, Neumann.
Cercocebus aterrimus, Oud.	Neumann, Johnston.
Colobus matschiei, Neum.	Johnston, Neumann.
C. abyssinicus poliurus, Thos.	Donaldson Smith.
C. ruwenzorii, Thos.	Johnston.
C. rufomitratus, Pet.	Johnston.
Cercopithecus æthiops centralis, Neum.	Johnston, Neumann.
C. schmidti, Matsch.	Matschie, Jackson, Johnston.
C. stuhlmanni, Matsch.	Matschie, Scott Elliot, Johnston.
C. bourtoulini, Gigl.	Donaldson Smith.
C. neglectus, Schleg.	Smith, Neumann.
C. otoleucus	Delmé Radcliffe.
Galago demidoffi, Fisch	Johnston, Delmé Radcliffe.
[*Periodicticus potto*]	Whyte, Johnston.

CHEIROPTERA.

Epomophorus schoensis, Rüpp.	Johnston.
E. minor, Dobs.	Jackson, Ansorge.
E. pusillus, Pet.	Neumann.
Rousettus stramineus, Geoff.	
R. collaris, Ill.	
Rhinolophus hildebrandti, Pet.	Jackson.
Hipposiderus caffer, Cuv.	Jackson, Johnston, Betton.
Megaderma frons, L.	Johnston, Neumann.
Nycteris hispida, Schieb.	Neumann.
N. thebaica, Geoff.	Ansorge.
Pipistrellus nanus, Pet.	Elliot, Ansorge.
P. kuhlii fuscatus, Thos.	Johnston.
Glauconycteris variegatus, Tomes	Jackson.
Scotophilus nigrita, Schr.	Jackson.
Vespertilio tenuipinnis, Pet.	Jackson.
Taphozous mauritianus, Geoff.	Elliot, Ansorge.
Nyctinomus lobatus, Thos.	Jackson.

INSECTIVORA.

Rhynchocyon stuhlmanni, Matsch.	Stuhlmann.
Macroscelides pulcher, Thos.	Delamere, Johnston.
M. delamerei, Thos.	Delmé Radcliffe.
Crocidura hedenborgi, Sund.	Jackson.

	Authority.
C. doriana, Dobs.	Ansorge.
C. nyansæ, Neum.	Delmé Radcliffe.
Chrysochloris stuhlmanni, Matsch.	Stuhlmann.
Erinaceus albiventus, Wagn.	Johnston, Neumann.
CARNIVORA.	
Felis leo, Linn.	Johnston.
F. pardus, Linn.	Johnston.
F. serval, Schieb.	Neumann, Johnston.
F. servalina, Og.	Neumann, Johnston.
F. caligata, Temm.	Neumann.
F. caffra	Johnston.
Cynœlurus guttatus, Herrn.	Johnston.
Proteles cristatus	Johnston, Doggett.
Hyæna crocuta, Erxl.	Johnston.
Viverra civetta, L.	Johnston.
Genetta victoriæ, Thos.	Johnston.
G. pardina, Geoff.	Neumann.
Nandinia binotata, Gray	Johnston, Neumann.
Herpestes caffer, Gm.	Jackson, Johnston, Neumann.
H. gracilis, Rüpp.	Neumann.
H. galera, Erxl.	Jackson.
H. galera robustus, Gray	Delmé Radcliffe.
H. albicauda, Cuv.	Johnston, Neumann.
Helogale undulata, Pet.	Rev. F. C. Smith, Neumann.
Canis adustus, Sund.	Jackson, Johnston, Neumann.
C. mesomelas, Schr.	Betton.
[*C. simensis?*]	Johnston.
Otocyon megalotis, Desm.	Betton.
Lycaon pictus, Temm.	Betton.
Lutra capensis, Schinz.	Neumann.
L. maculicollis, Licht.	Neumann.
Pœcilogale doggetti, Thos. & Schw.	Delmé Radcliffe.
[*Mellivora ratel*]	Johnston.
RODENTIA.	
Anomalurus jacksoni, De Wint.	Jackson, Neumann.
Sciurus calliurus, Buchh.	Jackson.
S. multicolor, Rüpp.	Emin, Donaldson Smith, Neumann.
S. rufobrachiatus nyansæ, Neum.	Jackson, Scott-Elliot.
Funisciurus böhmi, Reichen.	Jackson, Ansorge, Neumann.
F. jacksoni, De Wint.	Jackson.
F. ochraceus, Huet.	
Xerus erythropus, Geoff.	Ansorge.
X. rutilus, Critzschm.	Ansorge, Neumann.
Graphiurus murinus, Desm.	Jackson.
G. parvus, True.	Jackson.
G. smithii, Thos.	Rev. F. C. Smith.
Cricetomys gambianus, Waterh.	Johnston.
Tatera fallax, Thos. & Schw.	Delmé Radcliffe.
Otomys jacksoni, Thos.	Jackson.
O. irroratus tropicalis, Thos.	Delmé Radcliffe.
Dendromys sp.	Ansorge, Johnston, Neumann.
Arvicanthis abyssinicus, Rüpp.	Jackson, Johnston, Neumann.
A. massaicus, Pagenst.	Jackson, Ansorge.
A. pumilio diminutus, Thos.	Jackson.
Œnomys hypoxanthus unyori, Thos.	Ansorge.
Œ. hypoxanthus bacchante, Thos.	Jackson.
Mus arborarius, Pet.	Johnston.
M. ugandæ, De Wint.	Jackson, Ansorge, Neumann.

	Authority.
M. jacksoni, De Wint.	Jackson.
M. hildebrandti, Pet.	Ansorge.
Leggada minutrides, Smith	Johnston, Neumann.
L. musculoides, Temm.	Ansorge.
Dasymys bentleyæ, Thos.	Jackson.
Lophuromys ansorgei, De Wint.	Ansorge.
L. flavopunctatus, Thos.	Jackson, Ansorge.
Lophiomys smithii, Rhoads	Jackson.
Tachyoryctes splendens ibeanus, Thos.	Ansorge, Neumann.
Pedetes surdaster, Thos.	Johnston, Betton, Neumann.
Thryonomys swinderenianus, Temm.	Donaldson Smith.
T. gregorianus, Thos.	Jackson.
Hystrix galeata, Thos.	Johnston.
Lepus crawshayi, De Wint.	Johnston, Delmé Radcliffe.*
UNGULATA.	
Elephas africanus, Blum.	
Diceros bicornis, Linn.	
Equus burchelli böhmi, Matsch.	Johnston, Neumann.
Procavia jacksoni, Thos.	Jackson.
P. brucei, Gray	Neumann.
P. crawshayi, Thos.	Johnston.
P. marmota, Thos.	Johnston.
P. stuhlmanni, Matsch.	Delmé Radcliffe.
Hippopotamus amphibius, Linn.	
Phacochærus æthiopicus, Sund.	Johnston.
[*Potamochærus chæropotamus*]	Johnston.
[*P. penicillatus*]	Johnston.
Giraffa camelopardalis cottoni, Lyd.	Powell Cotton.
G. camelopardalis rothschildi, Lyd.	Johnston, Powell Cotton.
Ocapia johnstoni, Sclat.	Johnston.
Bubalis æquinoctialis, Blyth (*centralis*, Gray)	Neumann.
B. jacksoni, Thos.	Jackson, Johnston, Neumann.
B. cokei, Günth.	Johnston.
Damaliscus jimela, Matsch.	Jackson, Neumann.
D. tiang, Hengl.	Johnston.
Cephalophus johnstoni, Thos.	Johnston.
C. rubidus, Thos.	Johnston.
C. æquatorialis, Matsch.	Scott-Elliot, Jackson, Johnston.
C. grimmii, Linn.	Jackson, Johnston.
C. abyssinicus, Rüpp.	Neumann.
Oreotragus oreotragus, Zimm.	
Ourebia montana, Rüpp	Jackson, Johnston.
O. haggardi, Thos.	Donaldson Smith.
Raphiceros neumanni, Matsch.	Jackson, Johnston.
Madoqua kirkii, Günth.	Jackson, Neumann.
Kobus defassa, Rüpp.	Jackson, Johnston, Neumann.
K. thomasi, Scl.	Lugard, Scott-Elliot, Jackson, Johnston.
K. leucotis	Delmé Radcliffe, E. N. Buxton.
Cervicapra arundinum, Bodd.	Neumann.
C. redunca wardi, Thos.	Jackson, Johnston.
C. fulvorufula chanleri, Rothsch.	Donaldson Smith.
Oryx beisa	Harold Baker, Doggett (Baringo).
Egocerus equinus langheldi, Matsch.	Johnston, Delmé Radcliffe.
Æpyceros melampus, Licht.	Lugard, Jackson, Johnston.
Gazella grantii, Brooke	Jackson, Johnston, Betton

* Hares of perhaps three species are common throughout Uganda, but only one specimen has yet been identified.—H. H. J.

	Authority.
G. grantii notata, Thos.	A. H. Neumann, Ferguson.
G. grantii brightii, Thos.	Bright, Ferguson, Donaldson Smith.
G. grantii robertsi, Thos.	F. Russell Roberts.
G. thomsoni, Günth.	Jackson, Neumann.
Tragelaphus decula, Rüpp.	Neumann.
T. scriptus, Pall.	Neumann.
T. scriptus bor, Heugl.	Donaldson Smith.
Boöcercus euryceros isaaci, Thos.	F. W. Isaac.
Limnotragus spekei, Scl.	Speke, Jackson, Johnston, Neumann.
Taurotragus oryx livingstonei, Scl.	Jackson.
Strepsiceros kudu	Doggett, Johnston.
Bubalus caffer radcliffei, Thos.	Johnston, Jackson, Delmé Radcliffe.
B. pumilus	Johnston.
B. æquinoctialis	Johnston.
EDENTATA.	
Manis tricuspis, Raf.	Jackson, Johnston.
Orycteropus afer, Pall.	Johnston.

Dr. Bowdler Sharpe and Mr. Charles Chubb have been kind enough to furnish me with the following additional list of birds inhabiting the provinces of the Uganda and East Africa Protectorates included in the purview of the First Edition of this work.

ADDITIONAL SPECIES IN THE LIST OF BIRDS OF THE UGANDA PROTECTORATE.

BY CHARLES CHUBB.

ORDER GALLIFORMES.

Sub-order Phasiani.

FAMILY PHASIANIIDÆ.

Francolinus nigrisquamatus, Neumann, *Orn. M.B.*, x. p. 8 (1902, Omo River).
F. mulemæ, Grant, *Bull. Brit. Orn. Club*, xiv. p. 30 (1903, Mulema).

ORDER CORACIIFORMES.

FAMILY IRRISORIDÆ.

Irrisor granti, Neumann, *Orn. M.B.*, xi. p. 183 (1903, Ukamba).

FAMILY CYPSELIDÆ.

Cypselus barbatus (Scl.), Jackson, *Ibis*, 1902, p. 425 (Mau).

ORDER COCCYGES.

FAMILY CUCULIDÆ.

Cuculus jacksoni, Sharpe, *Bull. Brit. Orn. Club*, xiii. p. 7 (1902, Toro).

ORDER SCANSORES.

FAMILY PICIDÆ.

Dendromus niger, Neumann, *Orn. M.B.*, x. p. 9 (1902, Omo River).
D. permistus kaffensis, Neumann, *Orn. M.B.*, x. p. 9 (1902, Kaffa, Omo River).
D. massaicus, Neumann, Jackson, *Ibis*, 1902, p. 639 (Kibwezi).
Dendropicus simoni, Grant, Jackson, *Ibis*, 1902, p. 640 (Ravine, Nandi).
Mesopicus pœocephalus (Swains.), Jackson, *Ibis*, 1902, p. 641 (Entebbe).
M. ruwenzorii, Sharpe, *Bull. Brit. Orn. Club*, xiii. p. 8 (1902, Mount Ruwenzori).
Iynx pectoralis, *Vig.*, Jackson, *Ibis*, 1902, p. 642 (Nandi: Ravine).

ORDER PASSERIFORMES.

FAMILY MUSCICAPIDÆ.

Muscicapa reichenowi, Neumann, *Orn. M.B.*, x. p. 10 (1902, Omo River district).
Chloropeta natalensis umbriniceps, Neumann, *Orn. M.B.*, x. p. 10 (1902, Kaffa, Omo River district).
Cryptolopha læta, Sharpe, *Bull. Brit. Orn. Club*, xiii. p. 9 (1902, Ruwenzori).

FAMILY CAMPOPHAGIDÆ.

Campophaga ignea, Reichenow, *J.P.O.*, 1902, p. 258 (Njangabo).

FAMILY PYCNONOTIDÆ.

Criniger gracilirostris percivali, Neumann, *Orn. M.B.*, xi. p. 185 (1903, Kikuyu).
Xenocichla leucolæma, Sharpe, *Bull. Brit. Orn. Club*, xiii. p. 10 (1903, Toro Forest).

FAMILY TIMELIIDÆ.

Crateropus smithi omoensis, Neumann, *Bull. Brit. Orn. Club*, xiv. p. 15 (1903, Omo River).
Turdinus atriceps, Sharpe, *Bull. Brit. Orn. Club*, xiii. p. 10 (1902, Ruwenzori).
Bathmocercus jacksoni, Sharpe, *Bull. Brit. Orn. Club*, xiii. p. 10 (1902, Ruwenzori).

FAMILY TURDIDÆ.

Cossypha griseistriata, Sharpe, *Bull. Brit. Orn. Club*, xiii. p. 89 (1903, Ruwenzori).
C. archeri, Sharpe, *Bull. Brit. Orn. Club*, xiii. p. 89 (1903, Ruwenzori).
Alethe poliophrys, Sharpe, *Bull. Brit. Orn. Club*, xiii. p. 10 (1902, Ruwenzori).

FAMILY SYLVIIDÆ.

Apalis personata, Sharpe, *Bull. Brit. Orn. Club*, xiii. p. 9 (1902, Ruwenzori).
Phlexis rufescens, Sharpe, *Bull. Brit. Orn. Club*, xiii. p. 9 (1902, Ruwenzori).

FAMILY NECTARINIIDÆ.

Nectarinia purpureiventris, Reichenow, *Orn. M.B.*, i. p. 61 (1893, Migere, W. Mpororo).
Cyanomitra alinæ, Jackson, *Bull. Brit. Orn. Club*, xiv. p. 94 (1904, Ruwenzori).

FAMILY ZOSTEROPIDÆ.

Zosterops kaffensis, Neumann, *Orn. M.B.*, x. p. 10 (1902, Kaffa, Omo district).

FAMILY MOTOCILLIDÆ.

Macronyx sharpei, Jackson, *Bull. Brit. Orn. Club*, xiv. p. 74 (1904, Mau Plateau).

FAMILY FRINGILLIDÆ.

Serinus shelleyi, Neumann, *Orn. M.B.*, xi. p. 184 (1903, Uganda).

FAMILY PLOCEIDÆ.

Urobrachya media, Sharpe, *Ibis*, 1902, p. 118 (Ankole).
Pyromelana xanthochlamys, Sharpe, *Bull. Brit. Orn. Club*, xiii. p. 10 (1902, Hoima).
Cryptospiza jacksoni, Sharpe, *Bull. Brit. Orn. Club*, xiii. p. 8 (1902, Ruwenzori).
C. ocularis, Sharpe, *Bull. Brit. Orn. Club*, xiii. p. 8 (1902, Ruwenzori).
C. shelleyi, Sharpe, *Bull. Brit. Orn. Club*, xiii. p. 21 (1902, Ruwenzori).
Sitagra aliena, Sharpe, *Bull. Brit. Orn. Club*, xiii. p. 21 (1902, Mount Ruwenzori).
Amblyospiza æthiopica, Neumann, *Orn. M.B.*, x. p. 9 (1902, Omo River).

The following corrections to be applied to the original list of birds of the Uganda Protectorate published in the First Edition of this work:—

The abbreviated proper name "Daud." given as an authority for numerous species should be spelt thus, and not "Dand."

In the family *Picidæ*, *Campothera pennista* should be written *C. permista*.

Jyngipicus should read *Iyngipicus*; and *Jynx* should read *Iynx*.

In the family *Muscicapidæ*, *Muscicapa tornensis* should read *M. toruensis*.

In the family *Nectariniidæ*, the authority for *Drepanorhynchus reichenowi* should be given as Fischer, and not Sharpe.

The corrections and additions to the list of Reptiles, Amphibia,

and Fishes have been inserted in the body of the work in this Second Edition. They are supplied by Mr. G. A. Boulenger, to whom my thanks are due for much kind assistance.

In the First Edition of this book, on p. 644, mention is made of "sleeping sickness," and it is to some extent suggested that this fell disease is due to the *Filaria perstans* parasitic worm. In 1902 the ravages of "sleeping sickness" became so terrible—it is said that in twelve months nearly 30,000 Baganda, Basoga, and Kavirondo died of this disease—that the British Government despatched to Uganda, through the Royal Society, Dr. Aldo Castellani, Dr. Cuthbert Christy, Lieut.-Colonel David Bruce, R.A.M.C., and Dr. David Nabarro; while Captain Greig, I.M.S., was sent by the Indian Government to assist in the investigations of the above-named medical men. As the final result, it was discovered that the origin of the disease was a minute organism, *Trypanosoma castellanii* (a protozoon of the Class *Flagellata*, Order *Monadidea*), which was introduced into the blood of human beings by a species of Tsetse fly, *Glossina palpalis*. When the Trypanosomes reached the brain, the fatal disease of "sleeping sickness" began. Four reports, dealing amply with this subject, have been issued by the Royal Society.

The late Mr. G. T. Prior (who unfortunately lost his life in the Alps of the Tyrol in 1903) furnished me some time ago with additional notes on the collections of rocks and mineral specimens made by myself and others in the Uganda Protectorate. These notes are given below. They must be taken to supplement Mr. Prior's remarks in the First Edition of this book:—

NOTES ON THE COLLECTIONS OF

ROCKS AND MINERAL SPECIMENS FROM THE UGANDA PROTECTORATE

MADE BY SIR HARRY JOHNSTON, MESSRS. GEORGE WILSON, RACEY, WM. GRANT, C. W. HOBLEY, F. W. ISAAC, AND OTHERS.

BY THE LATE G. T. PRIOR, M.A., F.G.S., AT ONE TIME ASSISTANT IN THE MINERAL DEPARTMENT OF THE BRITISH MUSEUM.

The rock specimens include examples of three main groups—viz. (1) Archæan gneisses, granites, and schists; (2) Palæozoic shales and sandstones; and (3) Tertiary volcanic rocks. Archæan gneisses and schists are the basement rocks which occupy so prominent a position in the geology of the African continent. As stated by Professor Gregory in "The Great Rift Valley," in a journey inland from Mombasa to Uganda, beyond the low-lying coast region with its fringe of coral rock and Triassic sandstone, gneisses and schists soon become the prevailing rocks until the region of the Great

Rift Valley is approached, when they disappear beneath the phonolitic lavas which in Tertiary times were poured out from Kilimanjaro, Kenya, and the volcanoes of the Rift Valley. On the western side of the valley the Archæan gneisses and schists reappear in the Elgon district and Victoria region, and extend across Uganda to Ruwenzori. In the collection there are specimens of these rocks from the Central Province, Kavirondo, the Elgon district, Unyoro, Ruwenzori, and the Nile Province. With the gneisses and schists are associated dykes of both acid pegmatites and basic diabases and epidiorites, and also granulitic rocks analogous to the "Charnockite" series of India.

Above these basement Archæan rocks, in many parts of the Uganda Protectorate, occur non-fossiliferous sandstones, quartzites, and ferruginous schists belonging to the Palæozoic "Karagwe" series of Scott-Elliot and Gregory. Of this series there are specimens in the collection from the islands along the north shores of Lake Victoria Nyanza (Buvuma, Bugaya, etc.), and from Ankole, Busoga, and Unyoro. The specimens from Unyoro form a remarkable series of ferruginous schists and phyllites varying in colour from pale brown or purple to deep brick red. Most of them are hard, compact, siliceous rocks, and some are branded with black lydite, but others, which are softer and more schistose, graduate into ferruginous phyllites. These rocks present striking similarities with Hatch's "Hospital Hill" series of the Southern Transvaal, and also with rocks from the Ingwenya Berg, Swaziland. The "Hospital Hill" series of ferruginous shales occurs in the neighbourhood of Johannesburg, as part of Hatch's Cape system with the Witwatersrand auriferous quartz-conglomerate immediately above it (*Quarterly Journal Geological Society*, iv., 1898, 73, 99), and the Swaziland "argillites," which probably belong to the same series, occur in association with gold-bearing serpentine and talcose schists (*Geological Magazine*, vi., 1899, pp. 105-11; the rocks marked T. B. in Professor Rupert Jones's list). Amongst the rock specimens from Unyoro are specimens of quartz presenting some points of resemblance with that of the auriferous Banket formation of the Transvaal, but no visible gold could be found on any of the specimens. The Tertiary volcanic rocks of British East Africa consist mainly of soda-rich phonolitic rocks, derived doubtless from a nepheline-syenite or theralite magma. The lavas from the volcanoes of the Great Rift Valley and from Mount Kenya and the region between are characterised, like those of the Canary Islands and the Azores, by the prevalence of anorthoclase, by the large amount of soda-

amphiboles (cossyrite, catopharite, arfvedsonite), as well as of soda-pyroxenes, and by the absence of sphene and nosean. They form a remarkable example of a rock-series, showing a gradation in composition from basic phonolites, containing nepheline both in large phenocrysts and in the ground-mass, through phonolitic trachytes containing no recognisable nepheline, to phonolitic quartz-trachytes, and finally to acid riebeckite-rhyolites containing much quartz. The volcanic rocks from the western side of the Great Rift Valley and from Mount Elgon, to judge from the specimens in the collection, present some points of distinction with the rocks of the above series. Thus specimens of phonolite from the Nandi district conform more closely to the ordinary type of "nephelinitoid" phonolite and contain much sphene, and occasionally a little nosean, but no soda-amphiboles. This type of phonolyte also appears to be associated in the same district (specimen from beds of the Nyando and Kedowa Rivers) with more basic nephelinites in which felspar is almost wholly absent. In some of these rocks the nepheline, both as phenocrysts and in the ground-mass, is partially or wholly replaced by melilite. From Mount Elgon also come basic nephelinites and augitites, and also nepheline-melanite rocks allied to borolanite. In a volcanic agglomerate from Mount Elgon are fragments consisting of an aggregate of augite, magnetite, perofskite, and apatite, similar to the jacupiraugite of Brazil, and to some of the basic differentiation products of the nepheline-syenite of the island of Alnö, Sweden. Closely related to the phonolites, but in some respects intermediate in character between them and basalts and tephrites, are rocks from Mount Kenya, containing anorthoclase and augite, to which Professor Gregory has given the name of Kenyte. Specimens in the collection from Lake Nakuro and Korando Hill approach to this type.

Volcanic rocks are also found in the neighbourhood of Ruwenzori. The main mass of Ruwenzori consists of Archæan schists, in places traversed by dykes of epidiorite, but at the foot there are numerous crater lakes round which occur masses of volcanic tuff, specimens of which are in the collection. Specimens of tuff were also found in the neighbourhood of Lake Albert Edward in North-West Ankole, where more crater lakes occur, and a scoriaceous olivine-basalt comes from one of the volcanic mountains between Lake Albert Edward and Lake Kivu. Of minerals of economic value, the collection contains specimens of iron ore, graphite, and diatomaceous earth. The iron ore includes specimens of magnetite from Budolo Hill, Masaba (Elgon); Nagarive Hill, Bukedi; and Jinja, Busoga, and of ironstone (limonite chiefly) from Bukonge and Jinja in Busoga, from the

Bugaya' Islands, Buvuma, Ankole, and Unyoro. Graphite is present in small amount on specimens from Unyoro (chief Byabaswezi), and the diatomaceous earth occurs eight miles west of the Katonga River, and also on the shore of Lake Nakuro. As to the presence or absence of gold in Uganda, all that can be said is that no visible gold could be found upon any of the numerous specimens of quartz in the collection.

A CATALOGUE OF ROCK AND MINERAL SPECIMENS

(PROCEEDING IN GEOGRAPHICAL ORDER FROM EAST TO WEST)

NOT ALREADY MENTIONED IN THE FIRST EDITION OF THIS WORK.

MAU, NANDI, AND BARINGO DISTRICTS.

Locality.	Name.
Lake Nakuro, W. Coast, 6,000 ft.	Tuff.
Seget Valley, Nandi District	Nephelinite, altered.
Sigowet Hills ,, ,,	Phonolite with sphene.
,, ,, ,, ,,	Nephelinite.
Bed of Seget River, Nandi District	Phonolite.
Rabtumo Station ,, ,,	Gneiss, quartz.
Old ,, ,, ,,	Quartz.
New ,, ,, ,,	Gneiss.
Eldama Ravine, Baringo District	Phonolitic trachyte.
Kamásia	Basalt.
Lake Naivasha, S. and W. Coasts, Rift Valley	Obsidian.
,, ,, E. Coast, 6,000 ft.	Tuff and sandstone.
Bed of Nyando River, Nandi District	Nephelinite with melilite.
Kedowa River	Phonolite with sphene.
Upper waters of Kedowa River	Nephelinite with melilite and perofskite.
S. slopes of Tindaret, Mt. Kamililo Country	Kenyte.
Awichina, 8 miles north of Kisumu	Granite, fine grained.
Korando Hills, 2 miles north of Kisumu	Phonolite and kenyte.

CENTRAL PROVINCE.

ELGON DISTRICT.

Mumia's Sub-district	Diabase.
Lusimo River Sub-district	Granite porphyry.
,, ,, ,,	Decomposed granitic rock.
Ketosh (Upper Nzoia River) Sub-district	Basalt, weathered.
Sio River Sub-district	Gneiss.
Lego Sub-district	Diorite.

Mount Elgon, Southern Flanks.

7,000 ft.	Augitite.
8,000 ft.	"Augite-magnetite-perofskite rock" in tuff.
	Nephelinite and borolanite-like rock.
Bukonge, L. Vic. Nyanza	Quartzite.
Iganga	Granite.
Jinja	Hornblende epidote schist.
,,	Ferruginous schist.
Kakani, Bukedi	Decomposed rock.

ISLANDS ALONG NORTH SHORE OF LAKE VICTORIA NYANZA.

Bugaya Islands	Quartz with iron pyrites.
Main Island, Buvuma	Red ochre.
Near Kisubi	Sandstone quartzite.

WESTERN PROVINCE.

UNYORO.

Locality.	Name.
Territory of Chief Mutwa	Gneiss.
" " " "	Epidiorite.
" " " "	Hypersthene-granulite.
Territory of Chief Kiza	Shale.
" " " "	Sandstone.

I have only in conclusion to thank my numerous friends and correspondents for their advice and assistance in the compilation of this additional matter. I have interspersed a few additional illustrations furnished to me by Mr. J. F. Cunningham and the late Mr. W. G. Doggett which may be of interest to the readers of this book.

I cannot let this fresh edition of my work go to the press without recording the sincere sorrow I have felt at the loss of such a promising pioneer in African zoology as the late Walter Grimwood Doggett, who, after accompanying my expedition as Collector, joined the Scientific Department of the Uganda Protectorate. Whilst in the service of that department he was detailed to accompany the Boundary Commission under the command of Colonel Delmé Radcliffe. When this Commission was surveying the Kagera River, Mr. Doggett went out one day in a dug-out canoe to obtain fish for his zoological collections. The canoe drifted down-stream and struck suddenly on a submerged rock, thus capsizing and throwing Mr. Doggett, and the natives who were with him, into the water. The natives swam to shore, imagining that the white man would do likewise; but through some cause not yet ascertained, Mr. Doggett seems to have sunk at once.

H. H. JOHNSTON.

SITE OF MR. DOGGETT'S DEATH ON THE KAGERA

THE UGANDA PROTECTORATE

CHAPTER I

THE EASTERN PROVINCE AND THE RUDOLF BASIN

IT may be well to commence this book with an attempt to give in words and pictures some idea of the general aspect of the Protectorate, taking its provinces in turn, and illustrating either their more remarkable features or a generalised summary of their normal landscapes; and into this description to introduce, of course, the human types, animals, or vegetation characteristic of the scene.

This cursory survey of the lands which were grouped under the Uganda Administration shall commence with the Eastern Province*; touch lightly on the less known countries grouped together in the Provinces of Rudolf and the Nile; portray some of the features of the Central Province and of the better-known Kingdom of Uganda; then take the reader into the Western Province that skirts the Congo Free State and includes Mount Ruwenzori; and close with a brief description of that wonderful Congo Forest which stretches almost uninterruptedly in some directions from the west coast of Africa and the River Benue to the portals of the Uganda Protectorate.

The Eastern Province is divided into the districts of Mau, Baringo, Sūk, and Nandi. Its human inhabitants mainly belong to the fine, handsome Masai race and the peoples of Nandi and Sūk stock (closely allied in racial origin to the Masai), while in the coast regions bordering the Victoria Nyanza there are a few Nilotic and Bantu Negroes. Amongst the dense forests, the game-haunted wildernesses, and unfrequented plateaux, wanders a mongrel nomad race, the Andorobo, who represent a mixture of Nandi, Masai, and some antecedent negro race of dwarfish, Bushman stock. These Andorobo reproduce in a most striking manner the life which we may suppose to have been led by our far-away ancestors or predecessors in the earliest Stone Ages. They live entirely by the chase, often consuming the flesh of birds and beasts uncooked. Though they

* Now transferred to the Administration of the East Africa Protectorate.

commit considerable devastations among the game of the province, they are a picturesque feature when encountered, and a striking illustration, handed down through the ages, of the life of primitive man not long after he had attained the status of humanity and had acquired a knowledge of the simplest weapons.

The Eastern Province contains the celebrated Rift Valley, and the harsh, almost desert regions north of Lake Baringo; the splendid stretch of mountains and plateaux known from north to south in its different portions as Chibcharañán, Elgeyo, Kamásia, Nandi, Mau, Lumbwa, Sotik—the future white man's colony (a country of rolling grass-lands, dense forests of conifers, and bamboo-covered mountains); and a small portion of the north-eastern coast of the Victoria Nyanza, where the plateaux variously named break off into shelves and hollows and ridges, until they come down in a tumbling mass of mountains interspersed with marshes and the deltas of rivers into the stagnant gulf of Kavirondo Bay or the bright blue waters of the main lake. South of Lake Naivasha the territory of the Eastern Province stretches in a narrowing angle towards German East Africa, and the country in this direction becomes increasingly arid and lacking in rainfall, though it does not attain the almost desert character reached in the direction of Lake Rudolf. The plateau of the Mau also diminishes in altitude towards the German frontier, and the forests of conifers give way to dense woods of a more tropical character, or to spacious prairies used by the Masai as grazing grounds.

The Rift Valley and the Nandi Plateau * are the two main geographical features of the Eastern Province. The Rift Valley is a remarkable depression or narrow plain (dotted here and there with broken hills, active and extinct volcanoes), which would seem to stretch in a more or less defined condition from the vicinity of Lakes Rukwa and Nyasa on the south-west, north-eastwards to the Gulf of Tajurra and the Gulf of Aden. Looking at a relief map of Africa one is almost tempted to connect this narrow plain (which winds between the mighty cliffs of tilted plateaux) with the Rift Valley of Lake Nyasa, the Shire, and the Lower Zambezi; and to hazard the theory that it is the vestige of an ancient strait or arm of the sea that cut off at one time another and huger Madagascar. But I am not aware that this theory has any geological facts in its favour.

The Rift Valley from Lake Rukwa † on the south to the Gulf of Aden

* To avoid an inconvenient string of names being quoted every time this region is referred to, it is better to apply the word "Nandi" to the whole of the lofty region between the Rift Valley on the east, the German frontier on the south, Mount Chibcharañán on the north, and the Victoria Nyanza coast-lands on the west.

† It is perhaps scarcely necessary to remind the reader that Lake Rukwa is a large salt or brackish sheet of water near the south-east corner of Lake Tanganyika.

I. ANDOROBO DEVOURING RAW A DEAD WATERBUCK

2. AN ANDOROBO DRINKING AS PRIMITIVE MAN DRANK

in the north is strewn along its course and up its branches and blind alleys with a succession of lakes, large and small, fresh and salt. There is no need to enumerate here those which do not come within the limits of the Uganda Protectorate. Those which do are Lakes Naivasha (fresh), Elmenteita and Nakuro (salt), Hannington, Baringo, and Sugota (brackish), and the great Lake Rudolf, which is either brackish or only just potable. There are also not a few pools and lakelets as yet unnamed and undescribed, some of which are fresh and others salt. In the case of the bigger lakes, the degree of potability of the water depends a great deal on the recent rainfall and the extent to which the evaporation is exceeded by the supply. Very often, when the water of the bigger lakes is undrinkable close to the shore, half a mile farther out it may be relatively fresh. Where this depression of

3. "MANY LITTLE ISOLATED CRATERS"

the Rift Valley begins, somewhere in the neighbourhood of Lake Rukwa, it lies at an altitude probably not much exceeding 2,500 feet. It rises in height by degrees as it is followed northwards, till on the southern frontier of the Eastern Province the altitude is not far short of 4,000 feet. This rise continues till at Lake Naivasha the altitude is 6,300 feet, and the Rift Valley is here at its apex. It is as though this ribbon of depression had been arched in the centre of its long course, for from Lake Naivasha northwards the general level of the Rift Valley slowly decreases till at Lake Rudolf it is only 1,200 feet above sea level, and from this point again, with a few occasional upheavals and ridges excepted, it dwindles down to sea level at the Gulf of Tajurra.

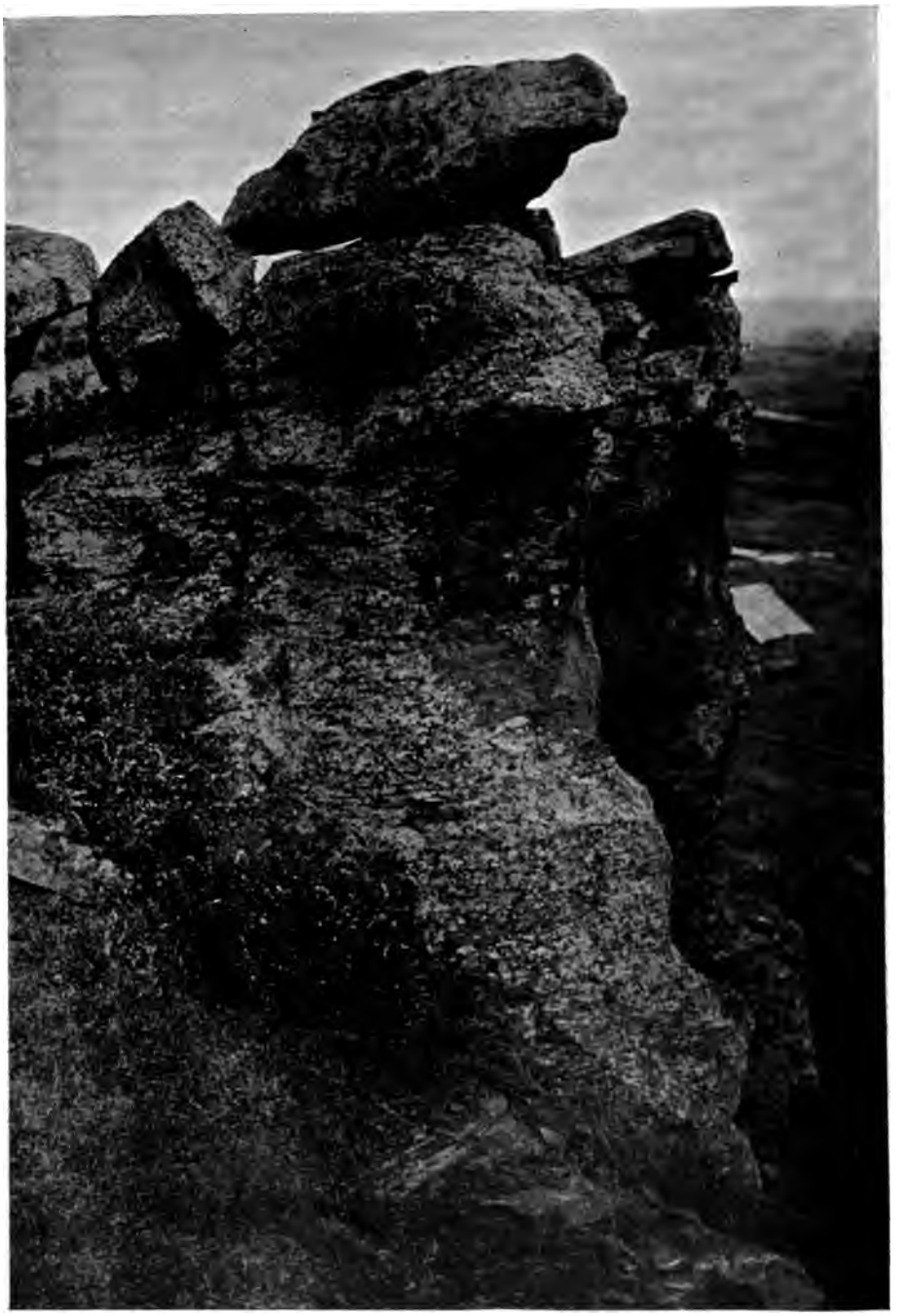
The Rift Valley makes a most striking frontier for the Eastern Province. The Kikuyu Plateau stretching northwards into the Laikipia Escarpment forms its eastern cliffs, and from these forested heights, ranging in altitude

4. STEAM RISING FROM VOLCANIC CRACKS, EL BURRO

between nearly 8,000 and 13,000 feet, one looks down, often over sheer precipices, on to a relatively flat plain below—thirty miles, forty miles, fifty miles broad—flanked on the opposite side by other mountain walls nearly as tremendous in altitude. Although from these heights the Rift Valley looks a smooth, flat plain, still its surface is studded every now and then with a huge extinct volcano like Longonot (a grey-brown cone with little vegetation on its sides), sierras and tongues of lava-covered hills, and many little isolated craters. Between Suswa on the south (a mountain as sterile in vegetation as Longonot) and Lake Nakuro on the north, the signs of past and present volcanic activity are numerous, "present" activity being represented by the steaming fissures in the broken ground about El Burro. The rocks are quite warm about these long cracks, from which steam is continually rising. The fissures look as if they were quite a recent rent in the earth. Sometimes this rent is so sharply cut, and follows so straight a course, that it might be a military entrenchment newly made by man.

The traveller from Mombasa before reaching the frontier of the Uganda Protectorate has passed through the country of Kikuyu, which is relatively well forested, while the ground is richly clothed with vegetation. As he descends into the Rift Valley, the Kikuyu vegetation decreases in luxuriance, and a very prominent feature is a particularly ugly form of dracæna (a kind of tree-lily), with stiff sword-leaves of sickly yellow-green. The mass of Longonot and the distant outline of the Suswa crater already referred to are imposing objects, but present very little vegetation with which to diminish the desert-like appearance of the scene. Towards the south end of Lake Naivasha there are many isolated pinnacles and fragments of rock. Along the western shores of Naivasha the vegetation becomes much richer, especially on the steep slopes of the Mau Plateau edge. All along the eastern borders of the lake there is sweet, short grass, kept low by the browsing of innumerable gazelles and the herds of Masai sheep and cattle. Near Naivasha station the Kikuyu Escarpment, descending in a series of terraces, terminates abruptly in precipitous cliffs on the edges of which huge boulders and monolyths are poised. The shores of Naivasha are in many places thickly belted with papyrus, which is growing at an altitude (6,300 feet) and in a mean temperature not usually associated with

5. STEAM RISING FROM FISSURE, EL BURRO



6. CLIFFS AND BOULDERS ON NORTH SHORE OF LAKE NAIVASHA

this rush. On the northern shores of Naivasha there are patches of fairly dense forest composed almost entirely of acacias. There is a great deal of water-weed in this lake, which at certain times of the year makes portions of its surface absolutely orange-brown. Naivasha, which in the Masai tongue is really called "Naiposha,"* contains two large islands, one of no particular interest near the north-west corner, and the other a little more than a mile from the south-east coast. This one, additionally connected with the shore by means of an intervening islet, is within reach by swimming

7. LAKE NAIVASHA: EASTERN SHORE

of various types of large game, while on the other hand the water to be traversed has served to cut off the island from visits by man, local and native man belonging to the Masai and kindred tribes being entirely unpossessed of canoes, and not much given to swimming. The result is that until within recent years a boat was placed by the local Administration on Naivasha, these islands had probably never been visited, and the antelopes and other game living on them were found to be extraordinarily tame. There are no crocodiles in Lake Naivasha, though there are

* Like so many other African names, the incorrect version is sealed for ever through the carelessness in hearing and transcribing on the part of the first explorers

hippopotamuses and numbers of otters. It was formerly stated that there were no fish, but my assistant, Mr. Doggett, discovered small fish there belonging to the types he has elsewhere found in this chain of lakes in

8. NORTH-EAST CORNER OF LAKE NAIVASHA

the Rift Valley. The water-birds are not quite so abundant as formerly, owing to the extent to which they have been shot at by Europeans; but during one visit to the lake we enjoyed a beautiful spectacle of rosy flamingoes in regiments of thousands lining the northern shore; though effects of this description pale before the million flamingoes of Lake Hannington, to be described later on. Lake Naivasha much resembles an Irish lough as seen from the eastern shore. There is a relative scarceness of trees on the noble mountains * which encircle it on the north and west; but the cloud shadows on these—their moorland tones of brown and green and mauve (the distant peaks and ridges being steeped in the ultramarine of distance)—greatly resemble Ireland's melancholy mountains.

There is one little object which is sure to strike the observant traveller with an eye for small beauties and an ear for pleasing sounds. Anywhere

* Rising to an altitude of 10,000 feet, or nearly 4,000 feet above the lake surface.

A Chat of Lake Naivasha in courting attitude.

near the Masai kraals, the Andorobo encampments, or European settlements in this region, a charming little bird, a species of chat (*Myrmecocichla cryptoleuca*), may be seen in numbers, quite as tame as the London sparrow. The bird in both sexes is black (though the female has a brownish tinge), with the exception of a patch on the pinion, which is snow-white. The male appears to be always courting the female, at any rate during a good proportion of the year. When engaged in this pleasing pastime, he sings with the most penetrating sweetness until almost intoxicated with his own melody. This feeling of great elation causes him to expand his tail into a fan over his back, spread his wings, and hop before the seemingly indifferent female. No description of the Rift Valley would be complete without the introduction of these chats, who are everywhere present and always dancing and singing while the sun shines.

Beautiful scenery characterises the western side of Lake Nakuro. The vegetation is, perhaps, rather harsh and East African in appearance, except for a noble wood of acacias at the north corner of this little lake. There is a weird picturesqueness where the rising heights of the Mau

9. LAKE NAKURO, FROM THE NORTH-WEST

Plateau fall in abrupt precipices down to the waters of Nakuro, hung with vegetation of that rather savage, grotesque aspect associated with gouty or spidery euphorbias, aloes, and thorny acacias. Enormous baboons

10. LAKE HANNINGTON AND ITS FLAMINGOES

perch themselves like fantastic Egyptian sculptures on every pinnacle or boulder. On the grassy uplands skirting the precipices the sleek cattle of the Masai are feeding, accompanied by herdsmen like Greek statues in terra cotta, these pastoral scenes having for a background the ultramarine waters of the lake 1,000 feet below.

Two or three days' journey over grassy downs where the zebras browse in their thousands, where the climate is European, and the heart is glad with the delicious air and the harmless sunshine, would bring one from Nakuro northwards to a more broken surface of the Rift Valley, where its

11. DEAD TREES STANDING FAR OUT IN THE WATER OF LAKE HANNINGTON

northern descent in altitude commences. Hidden away in a little rift valley of its own, a longitudinal trough between the Laikipia Escarpment and an up-reared ridge of volcanic rocks, lies little Lake Hannington, so concealed that it was long overlooked by the great explorers, and when found was named, perhaps not unjustly, after the misguided but plucky missionary bishop who tried to enter Uganda by the forbidden route and was slain in consequence by the uneasy Mwanga. It might be possible for a short-sighted man to walk parallel with the west coast of Lake Hannington and overlook the fact that he had a long sheet of water on his right-hand side, for the opposite Laikipia Escarpment is so lofty that

it completely overshadows the lake, and its blue-green reflections make the whole surface look like a distant plain covered with herbage. The north end of Lake Hannington is only separated from the waters of Baringo by a marshy district, and it is quite conceivable that in seasons of exceptional rains the waters of the two may mingle. I have even thought that Lake Hannington may be but a cut-off loop of Baringo, a vestige of a time when that lake extended much farther to the south. According to the natives' tradition, Baringo is far less in area than it was, owing to an increasing drought which afflicts that part of the Rift Valley.

12, FLAMINGOES' NESTS, LAKE HANNINGTON

Nevertheless, as regards Lake Hannington, this important fact should be noted (it is illustrated in my photographs)—that right out in the middle of the lake and at intervals along its shores there are the remains still standing of a former forest. These trees appear to have been killed partly by the saltish waters of the lake and in part by being made the eyries of innumerable birds, such as storks, herons, and eagles. An explanation of this might be that owing to recent volcanic action the ground where Lake Hannington lies may have collapsed into a trough which has been slowly filled up with water—water which has dissolved this natron salt from the soil. On the other hand, so far as native

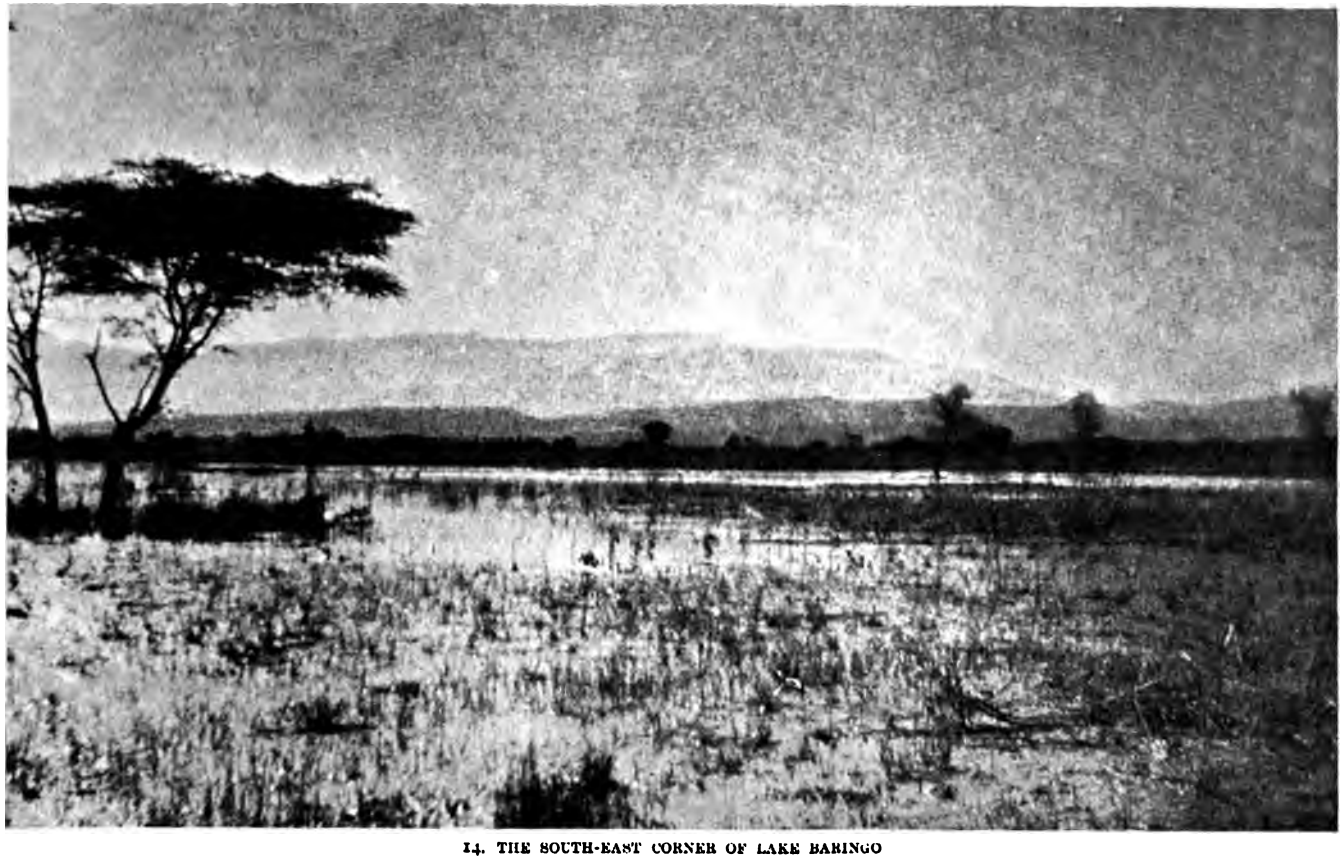
13. "HALF A MILLION OF FLAMINGOES": NORTH END OF LAKE HANNINGTON

tradition goes, Lake Hannington has always been there within the memory of man—say for several hundred years. It is called by the Masai "Mbátibat," and by the Kamásia "Makwária."

On Lake Hannington it is no exaggeration to say that there must be close upon a million flamingoes. These birds are mainly collected round the northern end of the lake and on the submerged banks which break up the deep blue-green of its still surface. The shores where they cluster, and these banks in the middle of the lake where they are above the water's edge, are dazzling white with the birds' guano. These flamingoes breed on a flat plain of mud about a mile broad at the north end of Lake Hannington, where their nests, in the form of little mounds of mud with feathers plastered on the hollowed top, appear like innumerable molehills. The birds, having hitherto been absolutely unmolested by man, are quite tame. They belong to a rosy species (*Phœniconais minor*), which is slightly smaller than the Mediterranean flamingo, but exquisitely beautiful in plumage. The adult bird has a body and neck of rosy pink, the colour of sunset clouds. The beak is scarlet and purple; the legs are deep rose-pink inclining to scarlet. Underneath the black-pinioned wings the larger feathers are scarlet-crimson, while beautiful crimson crescents tip the tertiaries and wing-coverts on the upper surface of the wings. Apparently the mature plumage is not reached until the birds are about three years old. The younger flamingoes very soon attain the same size as the rosy adults, but their plumage when they are full grown is first grey-white and then the colour of a pale tea-rose before it attains its full sunset glory. On the north coast of the lake the belt of flamingoes must be nearly a mile broad from the edge of the lake outwards. Seen from above, this mass of birds on its shoreward side is grey-white, then becomes white in the middle, and has a lakeward ring of the most exquisite rose-pink, the reason being that the birds on the outer edge of the semi-circle are the young ones, while those farthest out into the lake are the oldest. It is not easy to make the birds take to flight. When they do so suddenly and the shallow water is stirred, the stench which arises is sickening. The noise of these birds can be heard from nearly a mile distant. The kronk-kronk-kronk of the million, mingled with hissings and squitterings and splashings and the swish-swish-swish of those who are starting on flight, combine to make a tumult of sound in the presence of which one has to shout to one's companions in order to be heard. It is curious to watch the ungainly motions of these birds when they wish to rise in the air. Their flight has to be preceded by an absurd gallop through the mud before they can lift themselves on their wings.

Round about the end of Lake Baringo one enters a flat country, which

FLAMINGOES ON LAKE HANNINGTON. *(PHŒNICONAIAS MINOR.)*



14. THE SOUTH-EAST CORNER OF LAKE BARINGO

in times of heavy rain can be extremely marshy. At such periods the Rivers Tigrik and Molo unite their waters often in their lower courses and bring about an extension of Baringo in the direction of Hannington.

15. ACACIA-TREES, NEAR BARINGO

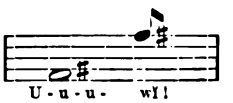
The altitude of Lake Baringo is 3,325 feet, while that of Lakes Sugota and Rudolf is not much over 1,200 feet; yet in descending to the level of Baringo one has come upon a hot, harsh-looking country, not greatly superior to the dreary regions in the Sūk and Turkana countries. Along the courses of permanent rivers there are splendid acacia-trees, wild date palms, and a certain amount of pleasing vegetation. But far away from permanent water the vegetation tends to be scrubby, thorny, and sparse. But there is a certain largeness in the landscape, and other elements lend themselves to the picturesque, notably the settlements of the Enjámusi agricultural Masai. This is the celebrated country of "Njemps" first discovered by Joseph Thomson, to which so many caravans have resorted, for rest amongst the friendly folk and the purchase of food, the Enjámusi —or, as they call themselves, "Nyarusi"—Masai being great cultivators. Their two great towns lie respectively on the banks of the Lower Molo

(here called Nyuki) and Tigrik Rivers. They are surrounded by belts of tall trees, mainly acacias, some of which must be considerably over a hundred feet in height, with green boughs and trunks and ever-present flaky films of pinnated foliage. In the rainy time of the year these trees are loaded with tiny golden balls of flowers, like tassels of floss silk, which exhale a most delicious perfume of honey. In the plains between the villages Grévy's zebra and a few oryx antelopes scamper about, while golden and black-backed jackals hunt for small prey in broad daylight with a constant whimpering. Enormous baboons sit in the branches of the huge trees, ready to rifle the native crops at the least lack of vigilance on the part of the boy guardians. Large herds of cattle and troops of isabella-coloured donkeys, with broad black shoulder-stripes, go out in the morning to graze, and return through a faint cloud of dust, which is turned golden by the setting sun in the mellow evening, the cattle lowing and occasionally fighting, the asses kicking, plunging, and biting one another. After sunset, as the dusk rapidly thickens into night, forms like misshapen, ghostly wolves will come from no one knows where, and trot about the waste outside the village trees. They are the spotted hyænas, tolerated by the Masai because they are the living sepulchres

16. CLIFFS NEAR THE SOUTH-WEST CORNER OF BARINGO

of their dead relations. When man, woman, or child dies amongst the Masai, agricultural or pastoral, the corpse is placed in the outskirts of the settlement for the hyænas to devour at nights. The cry of the hyæna is

not a laugh, as people make out, but a long-drawn falsetto wail ending in a whoop. It must be expressed by this notation:—



It sounds exactly what one might imagine to be the mocking cry of a ghoul; and but for the fact that we now find that the ghoul myth has a very solid human origin (since there are depraved people all over Africa at the present day who have a mania for eating corpse-flesh,* and this trait may also have cropped out in pre-Muhammadan days in Arabia and Persia), one might very well imagine that the idea of the ghoul arose from the hyæna, as that of the harpy probably did from the vulture.

The hills of the termites, or "white ants," are not only familiar in their general outline to all who have visited tropical Africa, but even to the untravelled reader of books describing African exploration. Therefore even the uninitiated would be struck by the extraordinary height and formation of the termite hills round about the Baringo District. This peculiar shape of ant-hill commences as soon as one has descended from the upper part of the Rift Valley to the level of Lake Baringo, and I believe continues northwards towards Abyssinia.

Lake Baringo has a fine clump of mountains—the Karosi Hills—at its north end, otherwise it is not a very picturesque lake. On the eastern banks are hills and mountains which rise in terraces to the edge of the Laikipia Escarpment. North of Baringo the country becomes increasingly arid, though it rather inclines to rise in altitude for some distance along the Rift Valley. There is, however, quite a sudden drop in level towards Lake Sugota, which lies in a hole, and is half mud-marsh and half lake;† and also in the valley of the River Kerio, which for a long distance up its course lies not very high above the level of Lake Rudolf (1,250 feet). All the country bordering Lake Rudolf is poor in vegetation, while in parts there are absolute sandy deserts or plains of loose gravel without vegetation. Except in the vicinity of permanent watercourses, the scrub is mainly composed of that intolerable "wait-a-bit" thorn, an abominable species of acacia which in very dry regions remains for years without leaves until saluted by the rain. Salt lagoons (covered with waterfowl), salt lakelets, and the dried-up beds of pools, white with natron salt,

* See Chapter XVI.

† Sometimes, indeed, the natives report that Lake Sugota is quite dry. It was, however, a large sheet of water when seen by officers on my staff in the early spring of 1901. There is said to be an active volcano near the north end of Sugota.

are constant features along the coast of Lake Rudolf. Occasionally, where streams from the western hill ranges in the Turkana, Karamojo, and Sūk countries bring down running water to the lake, wild date palms and the branching *Hyphœne thebaica*, or Dūm palm, may be seen with an occasional baobab, fig-tree, or green-barked acacia (*A. verrugosa*). On the rising ground to the west of the lake there is fairly good grazing, except after periods of long drought. Along the valleys of great rivers like the Turkwel, which seldom wholly dry up in their lower courses, there are forests of the tall acacia just mentioned (see illustration, p. 18). The

17. STRANGE TERMITE ("ANT") HILLS FOUND THROUGHOUT THE BARINGO AND RUDOLF REGIONS

only certain feeder of Rudolf is the mighty River Omo, which flows all the way from Southern Abyssinia into the north end of this lake. Along the lower course of the Omo the vegetation is of a tropical luxuriance, and in places there are huge stretches of papyrus swamp. With this exception the whole of the Rudolf region is almost as unprepossessing as the Sahara Desert. In the Turkana country, west of Lake Rudolf, the leading features may be summed up in these words: stony hills and thorny bush; poor grazing. Nevertheless, this land of scrub, short trees, "wait-a-bit," and *Acacia fistula* forests is, by reason of the scarcity of moisture and consequent absence of mosquitoes, healthy, and it is the home of the finest Negro

race of the Protectorate, whom the late Captain Wellby described as a race of giants. The Turkana are hardly distinguishable in appearance from the Sūk, and the language they speak is very nearly the same. Both Sūk and Turkana, as will be seen in the chapters dealing with this subject, are related to the Masai physically and by language.

In spite of the sterile nature of the country and the brackish water of the lake, this is (or rather was) a sportsman's paradise; but three things seem of late to have diminished the game in the Rudolf Province, one being the continued and appalling drought which is apparently killing

18. LAKE BARINGO, FROM THE WESTERN SHORE

all the vegetation not growing near to permanent watercourses; the second, the reckless attacks on elephants and rhinoceroses made by Swahili caravans coming from Mombasa, sometimes under the leadership of Goanese Indians; and thirdly, the ravages of the Abyssinians from the north. The lake seems to swarm with fish, and there are many hippopotamuses and crocodiles. The elephants of the Rudolf region are fierce, but carry magnificent tusks. This is (or was) a country where, coming from the Zanzibar coast or from South Africa, you first touched the influence of Arabia, for the nomad tribes of this region keep large numbers of camels, which were originally obtained from Southern Abyssinia or Somaliland. Others, again,

are in possession of ponies, descended from the Somali or Gala stock. But drought and the Abyssinians between them appear to have depopulated nearly all the east coast of Rudolf, and even the camels have died of the drought, and strew the country with their whitened bones. The late Captain Wellby, who visited these regions two years ago, wrote to me that the aspect of much of the east coast of Lake Rudolf was the most desolate he could conceive, like a picture of a dead world, strewn with the whitened bones of huge mammals and of men, no vegetation to be seen within reach of the eye—nothing but salt water and sun-baked rocks, themselves perhaps congealed lava. At the north end of Rudolf, owing to the abundant waters of the Omo and the Nakua, things bear a more cheerful aspect, or would do so if the Abyssinian raids could be restrained. Here, with proper protection from Ethiopian ravages, a large population might grow up. This district probably will be before long much visited by Europeans, owing to the rumours of alluvial gold in the mountains to the north-west of the Nakua River.

The country along the Upper Turkwel and Wei-wei Rivers, and also on the Kerio River before it reaches the hot lowlands, may be styled the Sūk country in particular, though the Sūk tribes stretch thence to Lake Baringo. All these lands are fairly well watered by the tumultuous streams which descend from the northern slopes of the Elgeyo and Kamásia Escarpments, and from that tumbled mass of strangely shaped peaks and ridges called the Sūk Mountains. Portions of this country are highly cultivated, and are resorted to by trading caravans for supplies of food. There is a good deal of wood, but it contains as a rule only those lofty acacias and papilionaceous trees and shrubs, fig-trees, and euphorbias characteristic of the average East African vegetation. Here and there is a kigelia, with its pendulous, red-green flowers and, more commonly seen in their place, the enormous smooth grey fruit, in shape exactly like the weight of a hall clock. The Sūk Mountains are so fantastic in outline, with such overhanging crags, precipices, notches, dips, and tilts (not to speak of the numberless hills set like isolated pyramids in the plain, and often crested with a bouquet of trees), that the scenery is very picturesque. Moveover, these mountains give rise to innumerable streams, the waters of which serve to irrigate the hot plains at their base.

As on our imaginary tour we are advancing southwards again, we may find ourselves climbing up through the extremely broken ground of the Sūk country on to the northern edge of that great plateau which, to avoid a multiplicity of names, it is preferable to call "Nandi." We should be attacking it at the edge of the Elgeyo Escarpment and near the flanks of a lofty ridge known as Chibcharañán—perhaps literally "attacking it," if we were compelled at this moment to be there in the body and

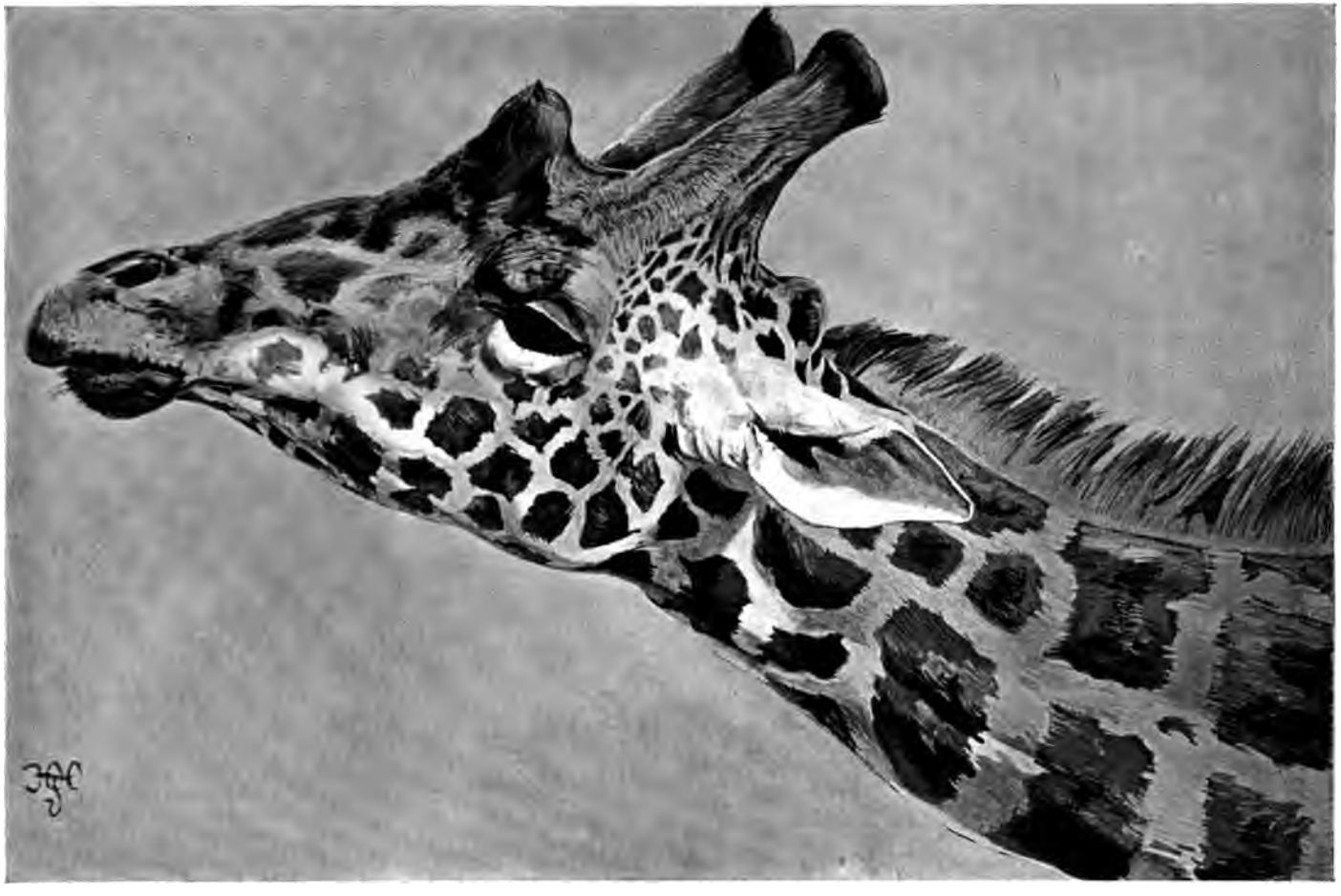
obliged at all costs to gain the summit of these forested heights; for the northern and western slopes of the Elgeyo Escarpment are inhabited by the fierce Japtuleil, the most northerly branch of that turbulent Nandi race which has given its name to this plateau. They are almost the only people in these regions at the present day actively hostile to Europeans.

The scenery of the Elgeyo Rift Valley is very grand, especially when seen from above. I have stood at one point near the north-western edge of the Elgeyo Escarpment and looked down a sheer 5,000 feet on to a gleaming river which threaded its way through a lake and numerous pools.

19. JUNIPER-TREES, NANDI PLATEAU

In the upper part of the Elgeyo Valley and on the slopes of Chibcharañán there is abundant forest, which, according to altitude, is of a tropical or of an Abyssinian or South African character. Here, coming from the north, begin those splendid forests of conifers (two species of juniper and a yew) so characteristic of the Nandi Plateau. Away to the west of Chibcharañán and Elgeyo, towards the great blue mass of Elgon, the country is of noble appearance: splendid rolling downs of short rich grass, patches of woodland, acacia forests, and vegetation of more tropical appearance along the valleys of the watercourses. This Gwas' Ngishu Plateau* slopes down gradually

* So called from the Gwas' Ngishu Masai who once inhabited it.



THE FIVE-HORNED GIRAFFE.

in the north to the Sūk or Elkakisera country, while southwards it rises in gentle undulations to heights of 7,000 and 8,000 feet, joining on thus to the special country of the Nandi. For the most part the downs, over which one's gaze can stretch for fifty or sixty miles as they gently slope towards the north or towards the Victoria Nyanza, are clothed with soft, silky grass, which takes a pale pink, mauve, grey, or russet sheen as the wind bends the flowering stems before it.

Over this Gwas' Ngishu Plateau (where the traveller must beware of following any presumed native path, since it is only a cunning device

20. GRASS ON THE GWAS' NGISHU PLATEAU

leading up to a game-trap, an oblong pitfall hidden with sticks and cut grass) roam countless wild animals at the present day—and I earnestly pray may continue to roam there, completely protected from the British sportsman and his oft-times insensate ravages. (The nomad natives who make these game-pits secure too small a proportion of the antelopes to be taken into much account.) Here may be seen large herds of giraffes as one might see cattle peacefully standing about in an English park. These giraffes are the finest development we yet know of the northern form; of that species of giraffe which extends all over North Central Africa from east to west, with the exception of Somaliland, where a peculiarly coloured species is developed.

The male of this particular variety found on the Gwas' Ngishu Plateau develops an extra pair of horn-bosses on the base of the skull. In colour the adult males and females become so dark on the upper part of the body that, seen from a distance, they seem to be black or purple with white bellies, and are therefore most striking objects, especially when they stand, as they often do, on the tops of low ant-hills, from which they survey with their keen sight all the surrounding country. The purplish look is given by the reddish-brown hairs which mingle with the black on the large spots. When a giraffe is thus poised on a mound like a sentinel, he is absolutely rigid, and moves his head so little that the appearance of immobility, coupled with the extraordinary shape—the short body and the enormously long tapering neck—give the traveller the fixed impression that he is looking at an unbranched tree-trunk which has been blasted by lightning or a forest fire.

But giraffes are not the only large game on these glorious downs. Elephants may be seen in great herds close by, but they affect rather more the scattered forest than the open plains. Where you see the giraffes you see also numerous rhinos in couples, male and female, or a female alone with her snub-nosed calf. The rhino looks a purple-black or a whitish grey as he moves through the long grass, according as the light strikes him. It is a glorious sight, say an hour after the sun has risen and the shadows are beginning to shorten, to traverse this grass country and see this zoological gardens turned loose. Herds of zebras and Jackson's hartebeest mingle together, and in face of the sunlight become a changing procession of silver and gold, the sleek coats of the zebras in the level sunlight mingling their black stripes and snowy intervals into a uniform silver-grey, whilst the coats of the hartebeests are simply red-gold. Dotted about on the outskirts of this throng are jet-black cock ostriches with white wings, a white bob-tail, and long pink necks. Red and silver jackals slink and snap; grotesque wart-hogs of a dirty grey, with whitish bristles and erect tails terminating in a drooping tassel, scurry before the traveller till they can bolt into some burrow of the ant bear. Males of the noble waterbuck, strangely like the English red deer, appear at a distance, browsing with their hornless, doe-like females, or gazing at the approaching traveller with head erect and the maned neck and splendid carriage of Landseer's stags. Grey-yellow reedbuck bend their lissom bodies into such a bounding gallop that the spine seems to become concave as the animal's rear is flung high into the air. The dainty *Damaliscus*, or sable antelope, with a coat of red, mauve, black, and yellow satin bordered with cream colour, stands at gaze, his coat like watered silk as the sunlight follows the wavy growth of the glistening hair. Once black buffalo would have borne a part in this assemblage, but now, alas! they

JACKSON'S HARTEBEEST.

have all been destroyed by the rinderpest. The eland still lingers in this region, but seems to prefer the scattered woodland to the open plains. Lions and leopards may both be seen frequently in broad daylight, hanging about these herds of game, though apparently causing no dismay to the browsing antelopes.

21. CUTTING UP GAME, GWAS' NGISHU PLATEAU

Still continuing our journey southwards, in this purview we shall, as we ascend the sloping plateau, arrive at altitudes of 8,000, 9,000, and 10,000 feet, where thick forests of conifers and trees characteristic of South Africa and of Abyssinia prevail. Above this region dense brakes of bamboo crown all lofty elevations from 9,000 to 11,000 feet. In swampy spots at these great altitudes may be observed growing lobelias

(which throw up tall spikes of flowers hidden under green bracts) and "golden rods" of scarlet and yellow.

The scenery on the Nandi Plateau between 7,000 and 10,000 feet in altitude reminds the homesick official and traveller over and over again of England, of Wales, of Scotland. Here are the swelling green downs crested with beautiful woodland, reminding one of Sussex or Surrey. Here is a roaring Scotch burn in full spate, the colour of foaming beer, tearing down over grey boulders through a forest of gaunt junipers, which at a little distance might well be pines or firs growing on Scotch

22. ON THE NANDI PLATEAU, LOOKING TOWARDS LUMBWA

mountains. Here you may see the Brecknock Beacons, scenery more mountainous than the Sussex downs, yet with the rich woods of Surrey, and the rocks of Wales. The natural meadows are full of blue forget-me-nots or of pink or white clover. In the ferny hollows on the edges of the woodland are innumerable violets (scentless, alas!), buttercups, daisies, and many other English-looking flowers and ferns growing amid the short grass. There is also a very pretty little dwarf iris, which, although not English, is still very European. In marshy spots on the higher uplands grows the "golden rod" of South Africa—the "red-hot poker" of old-fashioned gardens. Here there may be seen in

23. BAMBOO FOREST BEHIND ELDAMA RAVINE

24. BAMBOO FOREST, NANDI ROAD, 9,000 FEET.

large clumps the extraordinary lobelias, the flower columns of which grow to a height of fifteen feet and more. This beautiful land has not in it a single ugly or unfriendly spot. Everywhere the landscape is gracious and pleasing in a quiet, homely way, offering few violent forms or startling effects. It is thus singularly homelike, and as it is almost entirely without native inhabitants, it seems to be awaiting the advent of another race which should make it a wonderland of wealth and comfort, a little England, half a Scotland, or a large Wales, lying exactly under the equator at an average altitude of 4,000 feet above the Victoria Nyanza, of whose silvery gulfs and ghostly mountain coast-line glimpses at a distance of ninety miles may be caught occasionally from some breezy height or through the interstices of woods which themselves might be in Surrey. These views of a vast but distant seascape, which, owing to the height of the horizon, seem to appear in the sky, give that occasional touch of weirdness to the Nandi landscapes which would be the case in England or Scotland, if amid familiar landscapes we suddenly saw limned in grey or silver in the lower sky the features of a foreign land. In the direction of the Victoria Nyanza, the plateau sometimes crumbles away into broadening river valleys, through which one descends rapidly to tropical regions.

The forests which clothe the eastern descent of the Nandi Plateau above the station called Eldama Ravine, and which stretch (with intervals) between the Eldama Ravine and the Upper Molo River, besides similar forests skirting the lower parts of the same plateau almost as far south as the German frontier, are extremely dense, full of magnificent timber,

with a mingling of conifers, yews, witch-hazels, and some of the timber and vegetation more characteristic of equatorial regions—a combination, in short, of the tropical forest with the temperate. In these extremely dense woods, which it is impossible for a European to penetrate without a pioneering party to cut a way, but which are nevertheless the hunting-ground of the nomad Andorobo, the two most characteristic creatures are the colobus monkey and a large species of tragelaphus antelope, which resembles in some respects the nyala of South Africa, and in others the broad-horned tragelaph of the Gaboon. The presence of this tragelaphus is often made known by its peculiar bark, but, although well known to the Andorobo, it has very seldom been seen by Europeans. But the colobus monkey (which is found throughout the Uganda Protectorate and much else of tropical Africa, wherever the forest is dense enough, no matter whether it be cold of climate or always hot) is a far more common sight. The Andorobo who lurk in these forests live mainly on the flesh of this creature, which they shoot from below with poisoned arrows. Having satisfied their hunger on its flesh, they sell the skin with its long, silky, black and white hair, and its tail with the immense silky plume at the end, to the Masai or other warlike races, who make it into head-dresses or capes; or else to the European or Swahili trader. As the Andorobo are rapidly bringing the extermination of the colobus within view, its destruction and the sale of its skin are now prohibited, though it will be a long time before the prohibition is understood and obeyed by these wild men of the woods.

25. BAMBOO FOREST, NANDI ROAD, 9,000 FEET.

The Eldama Ravine station merits a few words of description. It is situated at an altitude of about 7,400 feet, on the broken slopes of the Nandi Plateau, facing in one direction the wooded Kamásia Hills, looking towards the corner of Lake Baringo in another, and gazing

26. A CASCADE AT THE RAVINE STATION

eastwards over a magnificent landscape—the breadth of the Rift Valley and the opposite escarpment of Laikipia. It is a place with an almost English climate, and gardens where English flowers bloom. Somehow every one who has come to it has fallen in love with it and wished to remain there. It has, however, but an indifferent water supply (should it become a large city), and lies twenty miles now from the finished railway line. But for these two disadvantages, it has suggested itself to Administrator after Administrator, traveller after traveller, as *the* capital of a United East Africa. I imagine, however, that this desired capital will eventually be built on the railway, perhaps twenty-five to thirty miles south of the Ravine. Yet the Ravine station will always remain a useful place from which to control the thickly populated Kamásia country and the regions about Lake Baringo.

The Nandi Plateau on the western side is eaten down at its middle into a wasp waist by the Nyando Valley. This valley has been selected as the easiest and shortest route for the Uganda Railway to follow from Lake Nakuro, up and over the Nandi Plateau, and down by a fairly gentle descent to Kavirondo Bay on the Victoria Nyanza. The valley and its branch valleys are formed by powerful streams rising in the Nandi and Lumbwa countries and uniting for the most part to form the River Nyando, which enters the easternmost prolongation of the long gulf of Kavirondo Bay. As the railway descends from its highest point of 8,300 feet on the flanks of Mount Londiani—descending in innumerable curves and twists to obtain a reasonable gradient—the traveller will quit the forests of junipers and yews, and enter that belt of umbrella-topped

acacias so characteristic of African mountains at about 6,000 feet in altitude. Below these he will skirt grassy downs, and will notice in the ravines and stream valleys the emerald-green ornamental foliage of the wild banana and the graceful fronds of the wild date palm. Then, at a lower descent still, comes downright tropical vegetation where the ground is suitable. If he can quit the railway, and wander away from the line to the black patches of forest about the streams, he would enter many a lovely bower, wherein dense foliage overhead produces shade that appears black in comparison with the dazzling sunlight outside. As the valley

27. NEAR THE MAU SUMMIT, UGANDA RAILWAY

broadens and broadens, and reaches down almost to the level of the Victoria Nyanza, there are sluggish, muddy rivers flowing through a country that easily degenerates into marsh. Here you reach the first habitations of native man—or did before the construction of the Uganda Railway revolutionised all this part of Africa. Until within three years ago there were no resident settled natives dwelling along this line of route, no natives from whom food could be purchased between Kikuyu, 200 miles away to the east, and these first outlying villages of the coast population round the Victoria Nyanza.

The people inhabiting these settlements will be probably for a year or

so still a source of *goguenard* amusement to the excursionists whom the Uganda Railway will bring from the east coast of Africa to the Victoria Nyanza; for they will see before them coal-black, handsomely formed negroes and negresses without a shred of clothing, though with many adornments in the way of hippopotamus teeth, bead necklaces, ear-rings, and leglets of brass. As the figures thus exhibited are usually models for a sculptor, this nudity is blameless and not to be discouraged; moreover, it characterises the most moral people in the Uganda Protectorate. This

23. MOUNT LONDIANI, NANDI PLATEAU (8,000 FEET)

ebon statuary lives in pretty little villages, which are clusters of straw huts (glistening gold in the sun's rays), encircled with fences of aloes, which have red, green, and white mottled leaves, and beautiful columns and clusters of coral-red stalks and flowers. There are a few shady trees, that from their appearance might very well be elms (but are not), and some extraordinary euphorbias, which grow upright with the trunk of a respectable tree, and burst into uncounted sickly green spidery branches. Herds of parti-coloured goats and sheep, and cattle that are black and

white and fawn colour, diversify these surroundings with their abrupt patches of light and colour.

These few notes describe the chief characteristics of the Kavirondo

29. "MANY A LOVELY BOWER"

villages to be seen round about Kitoto's (as the principal chief is called), on the Rivers Oroba and Kivosi; but they are also characteristic of the settlements of those Kavirondo who speak a Nilotic and not a Bantu language.

This particular tribe of the Ja-luo or Nyifwa, whose tongue connects

them closely with the Acholi people of the Central Province, are a great feature of the northern coast of Kavirondo Bay, and especially the newly sprung up Government station of Kisumu, which is close to Port Florence at the terminus of the Uganda Railway. They are very picturesque as they strut about the streets in their innocent nudity, decked with barbaric ornaments. The men wear not one ear-ring, but fifteen! Holes are pierced all round the outer edge of the ear, and in these are inserted

30. WILD BANANAS (*MUSA ENSETE*)

brass fillets, like melon seeds in shape, to which are attached coarse blue beads of large size and dull appearance. These beads the knowing tourist should collect whilst they can be purchased, as they are of mysterious origin and great interest. They are not, as he might imagine at first sight, of European manufacture, but have apparently reached this part of the world from Nubia in some very ancient trading intercourse between Egypt and these countries of the Upper Nile.

The scenery round Kisumu and Port Florence is not particularly prepossessing. Indeed, the tourist's first introduction to the Victoria Nyanza at this point will occasion him much disappointment. All he will see before him is Kavirondo Bay or Gulf, that lengthy northern prolongation of the Victoria Nyanza. This is a huge backwater of the lake, where the water stagnates and entirely loses the blue limpidity ordinarily characteristic of the Victoria Nyanza. It has a dirty green or even a dirty brown look. Seen from a distance when ruffled by the wind, it so closely resembles a red ploughed field that it is difficult to believe you are looking on a sheet of water. The ground is either a rank marsh (where the only beautiful feature are the numerous sacred ibises of

31. ON KAVIRONDO BAY, VICTORIA NYANZA

inky black and snowy white) or harsh rock. There are very few trees, and the principal object in all these landscapes is the candelabra euphorbia. If the reader (who will frequently see this form of vegetation appearing and reappearing in my photographs) wishes to realise what this strange tree looks like, let him imagine a gigantic cabbage or cauliflower which has run to stalk, only to countless stalks, many-jointed, and of gouty thickness. They curve upwards from the head of the trunk something like the arms of a candelabra. The stem which supports this heavy mass of succulent vegetation is short, irregular in its swollen girth, and generally of a scaly grey. The huge plant is usually loosely and insufficiently rooted in the soil, for it frequently topples over with its own weight in a

high wind, being extremely brittle. Therefore it is justly considered very dangerous by the natives to rest under the shade of a euphorbia. The juice is extremely poisonous, while at the very best the tree can only be called "quaint." It scarcely ever bears any leaves, but its dark green stalks are jointed and recurved like a scorpion's tail. When leaflets do appear, they are simple, minute, and pale green. Tiny yellowish sessile flowers break out during the rainy season, like little scabs of a disease, along the angular edges of the expanded stalks.

The countries bordering the east and north-east coasts of the Victoria

32. IN THE NANDI FOREST

Nyanza are much like this description of Kavirondo Bay, though Ugaya, to the south of that bay, has more woodland than the opposite peninsula of Uyoma, which is remarkably arid, rocky, and "euphorbiaceous." The two islands of Lusinga and Mfwanganu rise high, and have a certain amount of forest. The valleys between the mountain ridges that run southwards from Kavirondo Bay towards German territory are densely populated and highly cultivated by stalwart races of naked negroes, most of whom belong to the Bantu family as regards their languages, while others—the Lumbwa—are of the Nandi stock, and others, again, are related to the Ja-luo or Nilotic Kavirondo. This country is remarkably full of

33. IN THE NANDI FOREST

food products, and the natives seem to be good agriculturists. It is fertile, and between it and the Rift Valley enormous trackless forests stretch over the rising upland.

Forest of an extravagantly tropical character, an almost exact repetition of the Congo Forest, clothes the crumbling edge of the Nandi Plateau to the north-west, where it descends to the valley of the Nzoia and the rich lands of Kabaras or Bantu Kavirondo. I have rarely seen finer developments of forest in Africa than here—perhaps only in one or two spots of Uganda, in the Congo Forest, and in the Cameroons.

Even as I write this brief description of what was a few months ago Uganda's Eastern Province,* I realise the changes which are taking place day by day in its aspect, owing to the completion of this Uganda Railway, which will prove to be, I think, one of the mightiest factors yet introduced into Central Africa for the transformation of a land of complete barbarism to one at any rate attaining to the civilisation of settled India. I have had the privilege of seeing this country just in time—just before the advent of the railway changed the Rift Valley, the Nandi Plateau, the Masai countries, from the condition at which they were at the time of Joseph Thomson (1882) to one which day by day becomes increasingly different. On grassy wastes where no human being but a slinking Andorobo or a few Masai warriors met the eye; where grazed Grant's gazelle, with his magnificent horns, and the smaller but more gaily coloured *Gazella thomsoni*; where hartebeests moved in thousands, zebras in hundreds, ostriches in dozens, and rhinoceroses in couples; where, in fact, everything lay under the condition of Britain some 200,000 years ago; not only do trains puff to and fro (the zebras and antelopes are still there, accepting the locomotive like a friend, since it drives away the lions and ensures the respect of the Game Laws), but alongside the railway are springing up uncounted hideous habitations of corrugated iron and towns of tents and straw huts.

The solitude of the Rift Valley has gone. Thousands of bearded Indians, hundreds of Europeans and Eurasians, Negroes of every African type (from the handsome Somali to the ugly Mudigo), Arabs and Persians trudge to and fro on foot, ride donkeys, mules, and horses, pack the carriages like herrings, set up booths, and diverge far and wide a hundred miles in each direction from the railway line, trafficking with shy and astonished natives, who had scarcely realised the existence of a world outside their own jungle, for the beef, mutton, fowls, eggs, and vegetable food-stuffs which are to assist in feeding this invasion. Far away on Baringo natives are extending their irrigation schemes and planting twice as much as they planted before, knowing that there is a market where their spare food

* This area has recently been transferred to the Administration of East Africa.

GRANT'S GAZELLE.

can be exchanged for rupees. Farther north still, in the Sūk countries, Englishmen, Scotchmen, Goanese, Arabs, Swahilis, and Baluchis are pushing into deserts to buy donkeys, are trading for ivory which the railway will

34. "THE KAVIRONDO BEFORE THEY WORE TROUSERS"

carry to the coast at a rate less than the cheapest porter caravan. The Nyando Valley, for years without human inhabitants other than the shiftless Andorobo, is filling up with Masai, Swahili, and Nandi immigrants; while for twenty miles at a stretch on the beautiful heights and happy

valleys of Mau you are in the presence of an unintentioned European colony, some of which no doubt will melt away with the completion of the railway, but much of which must be the nucleus of the great white colony one may hope to see established on the only land really fitted for its development in Equatorial Africa. The Kavirondo, alas! are wearing trousers and "sweaters"; the sacred ibises have left Kisumu, for its swamps are drained. Piers and wharves, hotels and residences in corrugated iron, are springing up at Port Florence, destined, no doubt, to be a great emporium of trade on the Victoria Nyanza. The dirty brown waters of Kavirondo Bay, a gulf of the great lake that was only properly mapped last year, are now daily navigated by sailing boats and steamers. Before long this chapter on the Eastern Province will only possess the value of describing an aspect which in many details has ceased for ever to exist.

CHAPTER II

THE CENTRAL PROVINCE AND THE VICTORIA NYANZA

THE Central Province contains the Elgon, Karamojo, Lobor, Bukedi, and Busoga Districts.

The Elgon District includes the northern half of the Kavirondo country. It is difficult to locate this word "Kavirondo." It is probably of Bantu origin, but although it is recognised to some extent by the natives as a word indicating the north-east coast-lands of the Victoria Nyanza, it is nowhere actually applied by the natives to themselves; while the people loosely styled "Kavirondo" by the first travellers in these regions, though they possess in common a liking for complete nudity in both sexes, and a certain general resemblance in physique * and in manners and customs, yet are divided sharply into two sections by the languages which they speak. The people of Northern Kavirondo use closely related dialects of the Bantu family; those of Southern Kavirondo (already alluded to as the Ja-luo in the preceding chapter) speak a dialect of the Acholi language of the Upper Nile. The word "Kavirondo" was not originally known to the Baganda before recent years; they spoke of this district, in common with other parts of the Central Province where the people wear no clothes, as "Bukedi" ("The Land of Nakedness") or "Bugaya." The term "Kavirondo" will probably be always perpetuated now as the most convenient general name for all those natives speaking Bantu dialects west of Busoga and north of Kavirondo Bay.

The Kavirondo country, which thus forms the southern part of the Elgon District, is an extremely fertile land, traversed by the only three rivers which enter the northern half of the Victoria Nyanza, eastwards of Western Uganda. (It must be observed as a remarkable geographical feature that practically no running stream enters the Victoria Nyanza along the whole of its northern coast between Berkeley Bay on the north-east and the mouth of the Katonga on the south-west. Along all this coast the lake is bordered with high downs and hills, and from the back

* Dr. Shrubsall, however, pronounces the Kavirondo divided physically into Bantu and Nilotic types.

of these, within a few miles of the Victoria Nyanza, the water percolates slowly north-west to the Nile.) Except along the broken edge of the Nandi Escarpment, there is not much forest in Kavirondo, though those forests which follow the western slope of the Nandi Plateau are certainly amongst the densest and richest of the Protectorate. There is abundant evidence to show that Kavirondo was once a forest land, but that it has been deforested through the agency of man, only a few clumps of trees being left standing on hilltops in connection with the worship of spirits. Nevertheless, there is still a fringe of fine trees along every watercourse, and the country is so splendidly clothed in fine grass and luxurious

35. CROSSING THE NZOIA RIVER

herbage—to say nothing of the flourishing crops of an agricultural people—that the forest is not any loss so far as picturesqueness is concerned.

The whole of the Kavirondo country is most grateful to the eye. It consists of rolling downs (though there is a little marsh in the valley of the Nzoia) covered with the greenest of grass, and made additionally beautiful by the blending with the green of fleecy white, shining mauve, or pale pink, effects which are caused by the grass being in flower or fluffy seed. It is a breezy, healthy country, at an elevation ranging between 4,000 and 6,000 feet. The villages really consist of aggregations of separate settlements, each belonging to a single family—hay-cock huts surrounded sometimes by a moat choked with vegetation, and always by

36. FOREST ON THE SOUTH WESTERN FOOT-HILLS OF MOUNT ELGON

Acanthus arboreus.

to every little settlement is a huge pole like a bending flagstaff, on which are hung a festoon of little cages containing quails. These cages are made of plaited grass, and the quail within acts as a decoy, attracting other quails to the space below the cages, where snares are laid for their entrapment. The quails are required solely for eating, not for sport (quail-fighting), as in India.

38. LARGE WHITE BALSAM ON MOUNT ELGON

Amongst the Kavirondo both sexes work in the fields, and in a state of complete nudity, a condition which, as I remarked before, may be excused on account of the generally fine figures of glistening black which they possess.

Where the land is not actually under cultivation in Kavirondo, the prairies are gorgeous with wild-flowers at almost all times of the year.

39. ENTRANCE TO CAVE, SOUTH ELGON

40. THOMSON FALLS, RIVER SASURU, SCREENING MOUTH OF CAVE: SOUTH ELGON

41. HOUSE INSIDE CAVE, SOUTH ELGON

Prominent amongst these are the sunflowers (*Coreopsis*), which cause certain hillsides to blaze with yellow.

North of the Nzoia (or Nzeia) River the Kavirondo villages assume a different appearance right up the southern slopes of Elgon into a country inhabited by a branch of the Nandi stock. In place of the flowering hedge of luxuriant vegetation, there is a deep moat surmounted by a clay wall which encircles the village, and this clay wall is rudely arched in the gateway. The village itself resembles more in appearance those of the Muhammadan Sudan, especially in the direction of Hausaland.

The southern foot-hills of Mount Elgon contain rich forest in the

42. WALL OF CAVE-HOUSE

river valleys, a forest of a tropical character in spite of the altitude, which may reach to over 6,000 feet. Notable especially are the dracænas (an enormous tree-lily, the foliage of which looks like a bundle of sharp green weapons arranged as a trophy) and the albizzias. The albizzia is related to the acacia, and is a very lofty tree with pinnated foliage in dense masses, exactly like dark green velvet, and with an inflorescence on its upper surface greenish gold in colour. At altitudes of 6,000 feet there is a beautiful large white balsam growing in shady places. At 7,000 and 8,000 feet on the ridges of Elgon the ground is often covered with a wild white pelargonium which, except for the colour, resembles exactly its near ally, our so-called scarlet "geranium." But the white balsam, with flowers

that are about two and a half inches long by two inches broad, of a creamy white touched with rose colour in the centre, is one of the most beautiful objects in the floral world of Uganda. These balsams grow luxuriantly along the native paths encompassing the mountain, and their flowers look like large white butterflies poised on the succulent green.

The great interest of the southern slopes of Elgon lies in the caves, which were first discovered by Joseph Thomson. These holes or recesses, with a ceiling which may, near the mouth of the cave, arch to a height of something like thirty feet, are generally situated close to the base of the

43. ENTRANCE TO CAVE PARTIALLY CLOSED WITH STICKS AND STONES

awful mountain cliffs that mark the abrupt descent of the lowest terrace skirting the central crater wall. I am unable to throw much more light on the origin of these curious recesses than the information given by their first discoverer, Joseph Thomson, except to point out that similar caves exist on the northern slopes of the mountain at much the same level, and also at the base of precipitous overhanging cliffs. Very often the face of the cliff in which the cave is situated makes an angle of 100° with the terrace below and seems to menace an awful landslip. As these precipitous walls of overhanging rocks are streamed over by the cascades of rivers rising near the central crater, and as these cascades occur on an average every four

or five miles round the mountain mass at this altitude (an average 6,000 feet), it not infrequently happens that the mouth of a cave exactly coincides with the descent of a waterfall from the edge of the precipices far above, the water thus serving as a curtain to screen the mouth of the cave from sight when viewed in front. The native path leading to the cave will thus take you dry-shod under a river, and when you are seated at the mouth of a cave you may see the splendid glowing landscape of the plains through an opal-tinted veil of water. What is the origin of these caves? One can state no precise opinion with our present limited information. It is

44. "TREMENDOUS BUTTRESSES AND PRECIPITOUS CLIFFS"

true that these recesses at the base of the precipitous terraces so often coincide with the overhanging cascade of a river that quite possibly there may have been at one time a percolation of the stream from above, through the crumbling rock, which hollowed out these caverns. Later on, some cement-like material brought down by the water from above, or some lava flow, may have completely closed these cracks through which the percolation took place, with the result that the stream once burrowing through the cave now flows in a shallow rock channel high above it, and dashes itself in sheer falls of 100 feet or more, arching over the mouth of the cave, and continuing its course along a less precipitous gorge below. Certainly

nearly every cave I visited seemed in this way to be at the base of a precipice and at the head of a stream valley, and the number of caves thus screened by a waterfall was remarkable. Joseph Thomson inclined to the belief that the caves were the work of a vanished race, and that they were made in the search for minerals or precious stones. Certainly the negroes of Nandi stock now making use of these caverns have, or their forefathers have, enlarged them here and there by picking at the crumbling conglomerate with their feeble hoes and axes, and have thus enlarged and shaped the interior of many a cavern to suit their requirements.

45. MASABA VILLAGE, MOUNT ELGON

The interior of these caves is blocked up in some cases by houses very like the dwellings of the cattle-keeping Masai, made of sticks and leaves over which a framework of cow-dung and clay has been plastered. The ceiling is, of course, the sloping roof of rock. Some of these dwellings are or have been used for the housing of cattle, sheep, and goats; others for human beings. The floor of the caves is several feet thick in the hardened excrement of cattle, besides refuse and rubbish thrown down by human beings. The caves so swarm with fleas, and are so noisome from the atrocious stench arising from this ancient manure, that any extensive examination of them was intolerable. I should think, however, that some person with more time and patience at his command than myself on this

46. CASCADE, "OSBORNE" FALLS, NORTH ELGON

47. CROSSING WEST ELGON RIVERS

expedition, and who would endure for a time the attacks of the fleas, might obtain most interesting results by excavating the floors of these caverns. Native tradition never stretches very far back in these countries, but as far as it does stretch, the people declare the caves to have been inhabited from the earliest days of their traditions. Nowadays, owing to the Pax Britannica, they are practically deserted. The natives told me they would only be reoccupied either if war broke out again or if any unusual drought occurred in the lowlands, obliging them to drive their cattle to the mountain pastures.

48. CRATER WALL OF ELGON, SEEN FROM THE WEST

In many cases the entrance to the cave has been partially closed in at the side by boulders piled on top of one another and defended by a palisade of sticks. Altogether these caves are so interesting that some attempt by the local Government should be made to maintain them in their present condition as an object-lesson showing in all probability what the habitations of our own Cave Men were like in Great Britain hundreds of thousands of years ago. In the extreme south of Tunis and in other parts of inner North Africa there are, as we know, tribes of cave-dwellers of Berber stock who have brought cave-dwelling to a pitch of something like modern civilisation and refinement. I have seen

"Bureau de Poste" put at the mouth of a highly developed cave-dwelling occupied by a native official in the Tunisian Sahara. Cave-dwelling in these regions has been in all probability continuous from the early Stone Age, and has never developed in the direction of building, everything being done by excavation, though the people inhabiting these caves are practically white men of the Iberian stock.

The vegetation on the western flanks of Elgon is very rich, and quite West African in character; the birds also—parrots, turacos, hornbills, pigeons—having West African affinities. A handsome pigeon (*Columba*

49. EDGE OF CRATER WALL, ELGON, FROM THE EAST (OVER 13,000 FEET)

guinea), which I here illustrate, is a common object, settling in little flocks on the native plantations of grain. The scenery on the western side of the mountain mass is perhaps grander and more beautiful in its detail than on the other aspects. Tremendous buttresses and precipitous cliffs of gleaming granite or quartz or dark basalt advance from the great crater wall into the Bukedi plains. A good broad path has recently been made all round this western face of the mountain by an enterprising Uganda chief who was placed temporarily in charge of this district. From this road one obtains beautiful views of gleaming lakes and green marshes in the direction of those vast backwaters of the Victoria Nile.

Columba Guinea: a common Pigeon on Mt. Elgon.

The native inhabitants of West Elgon are a wild-looking and savage race, among which some stunted individuals recall irresistibly the facial features of the Pygmies of the Congo Forest, whom they closely resemble in their low stature.

The scenery up the Shiruko (Siroko) Valley is really very fine, with the enormous precipitous ridge of Muhasa to the south and Ghonyi to the north. The foot-hills up this Alpine valley are much cultivated by the natives, and are glistening green with bananas. Higher up, however,

50. THE HIGHEST POINT OF THE CRATER RIM (14,200 FEET)

the immense sombre forests of junipers, *Trichocladus*, and other trees of Abyssinian or Cape affinities begin, and clothe the ascent to the crater wall, itself bare of trees except arboreal groundsels.

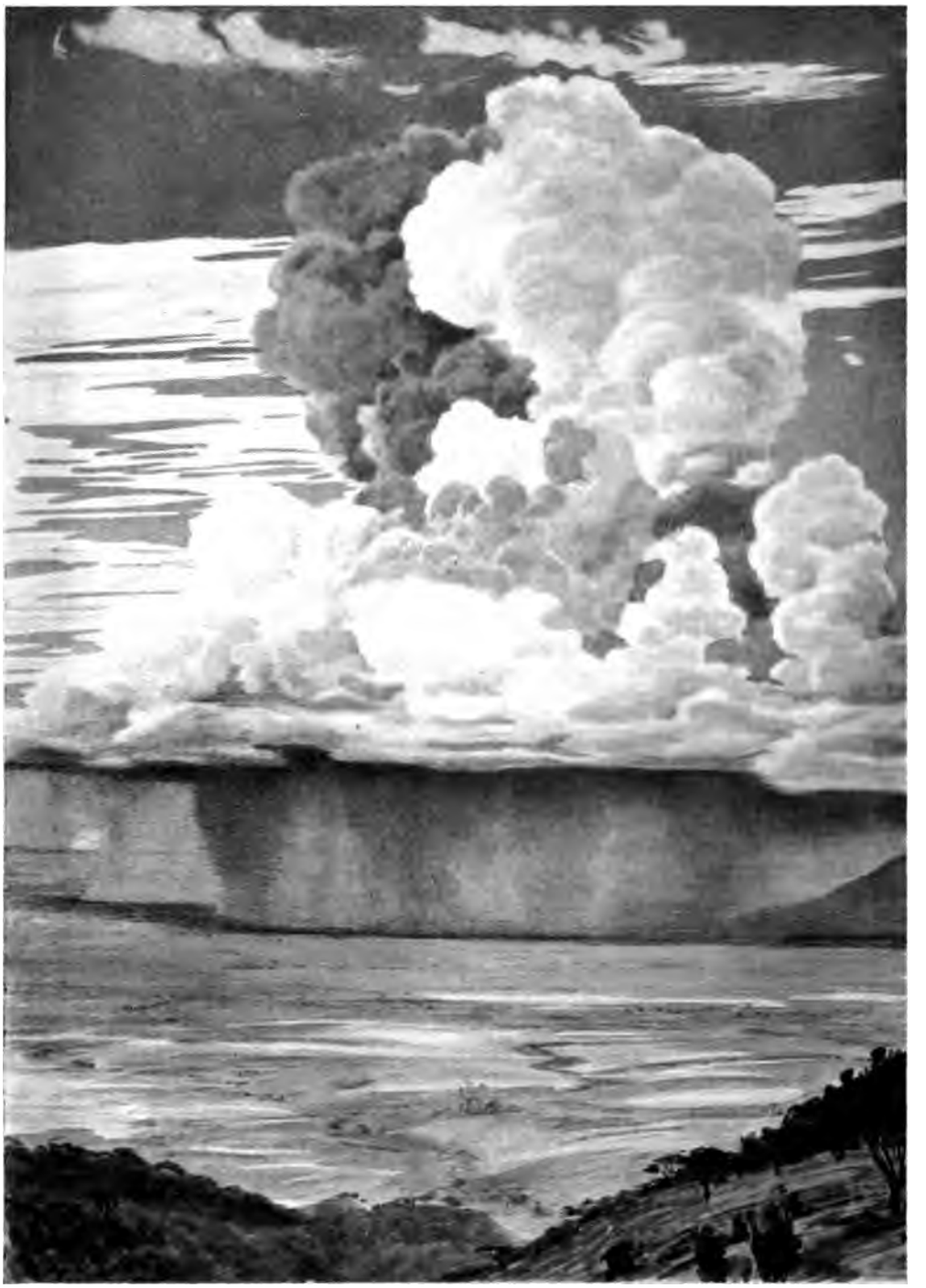
The scenery along the north face of Elgon is much the same. Below the great wall of the crater the mountain side is increasingly furrowed as the streams cut their valleys through the densely forested slopes. Then at 8,000 and 9,000 feet will come abrupt descents showing steps of naked gleaming granite or quartz. These crumble away again into foot-hills of fertile soil, which would be covered by rich tropical vegetation were not the place of this bush and forest taken for the most part by plantations

of bananas and native cereals. The landscapes to be seen from this northern face of Elgon are of remarkable beauty. Perched on charming ledges of neatly cultivated ground, surrounded by the glistening thatched houses—the roofs reaching almost down to the ground—of the Sabei tribe, one gazes across vast green prairies and blue-green swamps to distant lakes that are sheets of silver in the sunshine. Beyond these lakes are mountains of splendid shape, bulks of pure pale blue, touched here and there with faint sunlight revelations of pinkish grey and whitish emerald.

51. THE JACKSON-GEDGE EXPEDITION ON THE TOP OF MOUNT ELGON

Down this northern face of Elgon pour cascades like those which adorn the western and southern flanks. The roar of water is seldom absent from one's hearing. With the aid of these cascades Elgon might (in addition to its fertile soil, paucity of native inhabitants, and absolutely healthy climate) some day become the seat of a most powerful industrial community of Europeans, who would be able here to generate electricity which could subserve half East Africa.

The eastern aspect of Elgon differs from the other sides of the mountain in being much less rich in vegetation, and in having a less abundant rainfall. There is forest in stream valleys sometimes, but more



A View North from Elgon, towards Karamojo:
Thunderstorm sweeping up.

52. THE DESCENT TO THE CENTRAL CRATER OF ELGON (FROM A POINT ON THE RIM ABOUT 13,500 FEET IN ALTITUDE). SHOWS TREE GROUNDSELS AND OTHER ALPINE VEGETATION

often the watercourses plunge down rocky gullies through a country which is strewn with immense boulders and thinly covered with coarse grass and the usual stunted trees of the East African wilderness. It is remarkable how very red the rocks appear on this side of the mountain, this redness often extending high up the crater wall.

Elgon has, I believe, only been ascended to the highest point on its crater wall by Messrs. Jackson, Gedge, and Martin. From the photographs taken by Mr. Ernest Gedge on this occasion (and kindly lent to me for this book), one may see that the vegetation resembles closely the Alpine flora of Kenya, Kilimanjaro, and Ruwenzori. There are the weird lobelias and the giant groundsels. Snow falls on these highest points, but does not lie long. The greatest altitude on this rim of the crater is about 14,200 feet. The crater of Elgon is crossed by a native track from north to south, and provided the natives can arrange their journey so as not to pass the night on these chilly altitudes, where there is no forest, they seem to suffer little hardship on the journey.

Mounts Debasien and Kamalinga are notable objects in the Karamojo country, at any rate as seen from the vicinity of Mount Elgon. So far as outline goes, I think Debasien is the most beautiful mountain in Central Africa. Its height is given on Colonel Macdonald's map as not

exceeding 9,700 feet. This is probably correct; but as the mountain rises sheer from a flattish plain studded with tiny volcanic cones—a plain which is at a general altitude of 4,000 feet—it has the appearance of attaining to at least 10,000 or 11,000 feet at its highest point. Parts of Debasien are richly clothed with forest, but farther to the north the rich vegetation on the mountains gradually disappears, and the heights assume an arid appearance of tumbled rocks interspersed with stunted trees and thin grass.

Away to the east of Debasien the eye of the landscape artist notes with delight the fantastic heights of the Sūk and the Karamojo Mountains, some of them with crags thousands of feet in altitude, rising perpendicular or inclined at an angle of 100°, as if falling over. On the south-east of Debasien appear those strange pyramidal hillocks to which I have made allusion in describing the Sūk country. I cannot insist too much on the remarkably regular form of these natural pyramids. One feels convinced again and again in regarding them that they must be artificial mounds, like those vestiges of a lost civilisation in North America. They are, I suppose, little more than the worn-down fragments of a table-land, though what agency causes them to assume their

53. A DISTANT VIEW OF MOUNT DEBASIEN (FROM NORTH-EAST ELGON), WITH SŪK PYRAMIDAL HILLS IN FOREGROUND

absolutely regular outline (which is that of a funnel placed on its broad end and tapering up to a sharp apex) I cannot guess.

The Karamojo country has lately been suffering from that drought which has afflicted all North-East Africa. But the rainfall of this country appears never to be very abundant, except in the south-east, among the Sūk Mountains. Yet there is a considerable amount of cultivation in Southern Karamojo, and in the adjoining but little-known district of Lobor there is a dense population and a good deal of land producing crops of native cereals.

54. LOOKING TOWARDS THE PLAINS OF BUKEDI FROM WESTERN SLOPES OF ELGON

In Lobor there is a certain amount of forest along the river banks, and the southward aspect of this country, which lies within the watershed of the Victoria Nile, enjoys a fairly good rainfall, and is well clothed with vegetation.

South of Lobor is the thickly populated District of Bukedi, which consists mainly of vast plains of rich grass and huge swamps which border the rivers or which are choking up the lakes that serve as reservoirs and backwaters for the Victoria Nile. "Bukedi" is really a Uganda word meaning, as already related, "The Land of Naked People," but it has been found convenient to apply it to this particular district, which is inhabited by the Lango and Miro tribes, who differ little in appearance and scarcely at all in language from the Acholi of the Upper Nile. Lobor to the north is inhabited partly by people of this stock and partly by tribes speaking languages related to the Masai-Sūk family.

Bukedi and Lobor probably constitute at the present time the wildest and least-known parts of the Uganda Protectorate. Lobor is only known to us through the explorations of Colonel J. R. L. Macdonald's expedition, though Bukedi is now under the administration of a Uganda chief, and has been thoroughly subdued lately in connection with the rout and dispersal by Major Delmé Radcliffe of the last remnants of the Sudanese mutineers who took refuge in this part of the Protectorate.

In the southern part of Bukedi are those extraordinary marsh-lakes Kwania, Kamoda, and Kioga (sometimes called Choga). Lake Kioga receives the Victoria Nile after its descent down the rapids which follow

55. "ELGUMI PEOPLE CLUSTERING ON ANT-HILLS"

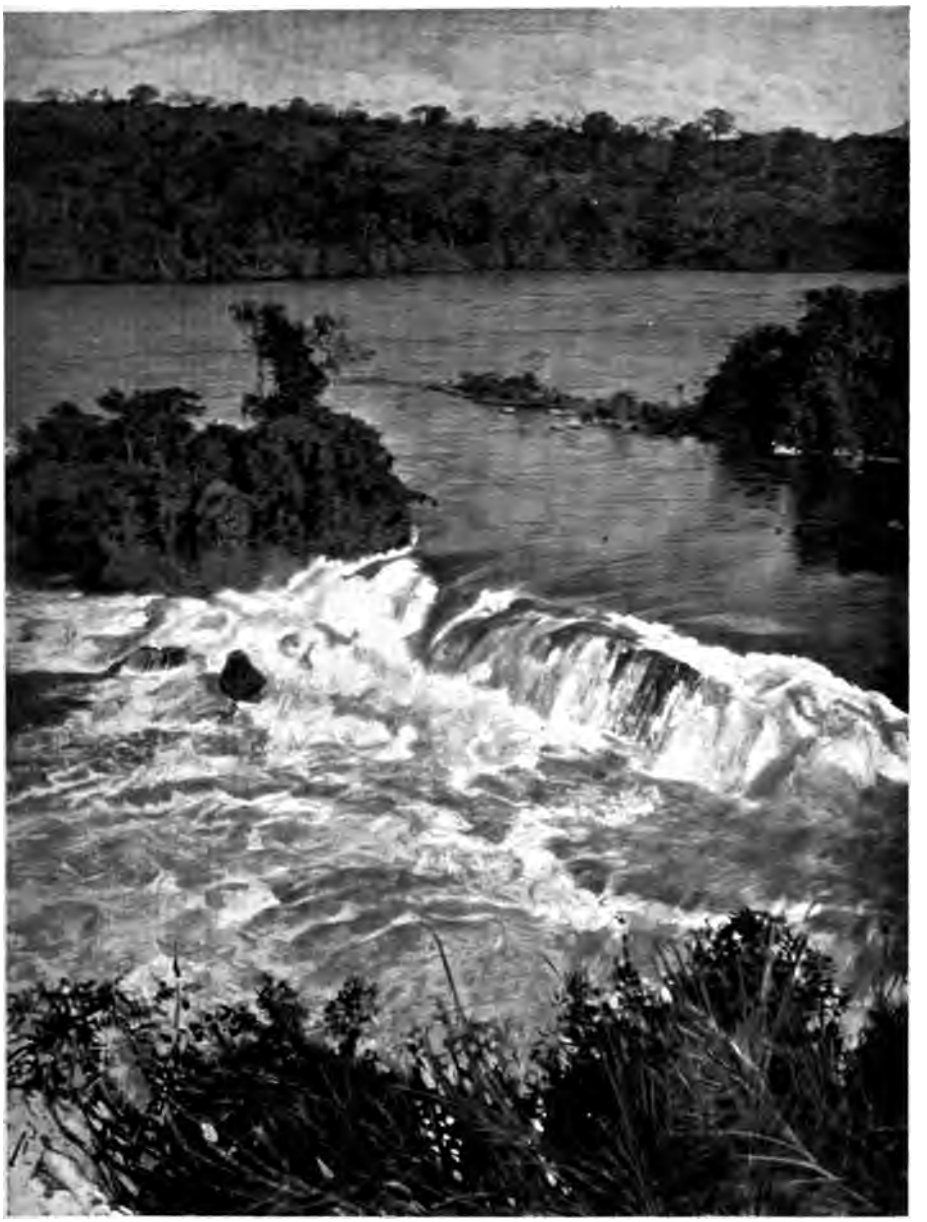
the Ripon Falls. The current of the Nile forms a discernible channel up the western part of this winding lake, though the water is often blocked with sudd. There is a good deal of clear water in the southern and central parts of Lake Kioga, but the banks are almost unapproachable through the growth of papyrus and reed jungles. On those almost-islands of Bwiro and Kwara, nearly enclosed by the fjords and branches and connecting channels of these lakes, there is dry ground covered with low scrub, and occasionally rising into isolated hillocks. The country seems to be extremely well adapted to native agriculture, and no doubt, owing to the presence of these swamps, is less in dread of defective rainfall than the stony regions to the north. This condition of constant swampiness—

56. A LANE IN BUSOGA

of rivers that are narrow marshes, and of lakes that may have open water in their centre, but are belted round the sides with untraversable swamps—appears to extend from Bukedi across the plains to the very verge of Elgon's foot-hills, and thence again westwards to Muruli on the Victoria Nile. Between Elgon and Bukedi, however, though the land is occasionally swampy, it is excellent soil, and a good proportion of it has been put under cultivation by the fine, tall naked tribe of the Elgumi,* a race speaking a language closely allied to the Sūk. There are a good many ant-hills in the Elgumi country, and it is the custom of the natives when strangers pass along the paths to cluster on these ant-hills until the little mounds become a mass of black humanity, that stands perfectly immobile, silent, neither friendly nor hostile, watching the passer-by. The men are generally resting their hands on long wands, and are often accompanied by prick-eared dogs of pied black and white, or black and tan and white, that are singularly like a breed of dogs depicted on the Egyptian monuments. The lithe, well-proportioned limbs of the tall Elgumi, coupled with their faces that are often handsome and of regular outline, make them quite a picturesque adjunct to the spacious landscapes of their country, with its fertile fields, its patches of apple-green marsh, and its stretches of clear blue water. The hills and isolated mountains dotted here and there over the Elgumi and Bukedi countries assume quaint forms and outlines, notably that square-cut chunk, not yet placed on any map, known to the Masai as Longelai, to the Elgumi as Namboga, and to the Kavirondo as Kangaiwa.

South of the marshy countries of Bukedi and Elgumi is the District of Busoga, a land which has a strong resemblance in its present inhabitants and in its formation and physical geography to the adjoining country of Uganda. Busoga is part of the dam which shores up the northern end of the Victoria Nyanza, through which the Nile breaks at its birth. The northern parts of Busoga, where they verge on Lake Kioga and Lake Mporogoma, are below the surface of the Victoria Nyanza in altitude. The land very gradually rises as you proceed southwards at least 1,000 feet in average height, and is at its highest where it overlooks the shores of the great lake. Except in the northern parts of Busoga, near the marshes, the country is still thickly forested, and it was at one time evidently one vast tropical forest, like portions of Uganda, Toro, and Unyoro, and like much of Kavirondo likewise was. The traveller coming from the east feels, when he crosses the Sio River and enters Busoga that he has reached something like West Africa at last. Banana plantations grow everywhere in splendid luxuriance. Whatever is not cultivated fields is tropical forest of grand appearance. The grey parrot of West Africa

* Elgumi is the name given to them by the Masai. I believe they call themselves "Wamia."



57. "THE BIRTH OF THE NILE" (RIPON FALLS)

swarms in these woodlands, fills the air with its shriekings and whistlings, and is a very pretty bit of colour—grey, white, and scarlet—as it plays about the tree-trunks. The magnificent blue plantain-eater (*Corythæola*), the violaceous plantain-eater—violet and crimson with a primrose-yellow beak—and large hornbills with enormous white casques people these lofty trees, from which indiarubber lianas sway like the ropes to be used in moving stage scenery. Except close to their sources, there are few running rivers, the brooks soon becoming choked with water vegetation, and degenerating into swamps, at the bottom of glades of black forest, or open marshes. Perhaps the most charming characteristic of Busoga is its lanes. The inhabited and settled country is traversed by these in all directions—neat paths, broader than the average African path, running for miles in the most delightful shade between high hedges of cultivated dracænas or other large-foliaged plants, or a succulent *Salvia* with thick broad green leaves and bright blue flowers, under canopies of richly foliaged trees, many of them celebrated for their brilliant flowers, like the lovely ekirikiti (*Erythrina*)—with bean-blossoms, as it were cut out of scarlet velvet—or the magnificent *Spathodea*, whose flowers are the shape and almost the size of Roman lamps and a vivid scarlet, so that the tree looks as though it had been hung with crimson lights for some illumination. Busoga may well boast of being one of the most beautiful districts of the Protectorate. I would that it were equally healthy. Here and there there is high ground where Europeans can live without much fever, but in the immediate proximity of the waters of the Victoria Nyanza it is often unhealthy. But what a country of noble landscapes!

Perhaps next to the snow-range of Ruwenzori, highest of African mountains, the most interesting landscape in the Uganda Protectorate is that which I have entitled "The Birth of the Nile." The picture given here is taken on the west side of the Ripon Falls, at Bugungu, at the spot where Speke was led by the Baganda in 1860, to see with his own eyes how the greatest lake in Africa gave birth to the mainspring of the greatest river. The Victoria Nyanza (the area of which is about 27,000 square miles) was first sighted by Speke in 1858, and although he saw but one of its restricted southern gulfs, he believed the stories the Arabs told him of its vastness, and jumped to the conclusion that it was the main source of the Nile. Nearly three years were to elapse before he was able to prove his startling prognostication by the sight of the Victoria Nyanza at the head of Napoleon Gulf suddenly developing a marked current and falling away in foam over the rocky barrier named by Speke the Ripon Falls. Speke, in his researches, was lucky in that he was led straight to his object by the intelligent Baganda. Had the northern shores of the Victoria Nyanza been inhabited by savages unwilling or

Spathodea nilotica

unable to give information, we can picture the innumerable disappointments that Speke and Grant might have sustained as they explored gulf after gulf, creek after creek, inlet after inlet, which the great lake pushed towards the north, and all of which save one were blind alleys.

There is nothing about the beautiful Napoleon Gulf as one enters it from the south to show why it, more than any other bay or inlet of the lake, should be the issue of the Nile, except perhaps that as you near

58. NAPOLEON GULF (LOOKING SOUTH) AND THE "ROW OF WHITE FANGS" (AN ANCIENT ROCKY BARRIER)

the northern end of the gulf you may discern a slight, a very slight, current tending northwards. But this current is faintly discernible right across the lake, north-eastwards, from the mouth of the Kagera (the most important feeder of the Victoria Nyanza) towards the Busoga coast. Nevertheless, the winds that sweep over the Victoria Lake are given to causing false tides and false currents, and the casual traveller would not be particularly struck with the drifting of vegetation which certainly does occur from the mouth of the Kagera towards the Ripon Falls. At the

northern extremity of Napoleon Gulf, which is one of the most beautiful land- and water-scapes of the world, there are bold hills which come down almost cliff-like towards the lake shore. The traveller advancing towards what seems to be the end of the gulf is aware, first of all, of a long row of white fangs, the remains of a rocky barrier which no doubt preceded the existing Ripon Falls as the gateway of the Nile. These rocks are whitened almost to the whiteness of snow by the guano of innumerable water-birds, chiefly cormorants and darters. Passing to the left or to the right of this row of white fangs, one lands either at the Bugungu

59. THE RIPON FALLS AT THE BIRTH OF THE NILE

(Uganda) or Jinja (Busoga) side of the Ripon Falls. A sharp turn of the narrow gulf to the north-west suddenly reveals a swift-flowing current and an irregular curtain of spray broken at intervals by densely wooded islets crowned with tall palms. The banks of the river—as it has now become—are perhaps 200 feet above the water, and are densely wooded. A mile back on either side, however, from the water's edge, the place of the woodland is taken by agreeable downs of short grass, studded with occasional trees. It would be difficult to find more gracious landscapes than may be observed in the vicinity of the Ripon Falls. The Nile at its birth is perhaps 300 yards wide. The falls are probably not

more than thirty feet in depth, though this height varies slightly according to the season of the year, for the level of the Victoria Nyanza has a rise and fall of about two feet in average seasons.

To my mind the Ripon Falls are best seen from the Uganda side.* A winding path leads from the green downs of Bugungu to the water's edge immediately below the fall, and here one may indulge in the most delightful familiarity with this stupendous movement of nature; for in perfect safety one may peep upwards through the welcome shade of overhanging trees into the awful green arch of water that is streaming over

60. THE RIPON FALLS

the unseen step. As you watch the descent of this tremendous cascade you can see large fish as though they were enclosed in thick glass or in aspic being carried down the descent of water—unwillingly, as I believe. When the glassy green slope breaks into snowy foam, the great fish leap high into the air as if making frantic struggles to ascend the cascade and regain the placid gulf from which they have unwillingly drifted. In this tiny little cove at the side of the great fall the natives stand with long spear-like harpoons stabbing at the fish as they are carried over,

* The Nile is the boundary between the Kingdom of Uganda and the adjoining District of Busoga.

and frequently impaling and pulling them in to the rocky ledge. White egrets and black cormorants stand on every pinnacle of rock across the falls with the same object of seizing fish.

From the heights of Bugungu, above the river and below the falls, a glorious landscape is made up of green forest fading into purple (near the foreground the rich green wild date palms are brightened by their bunches of orange dates), and of a blue-grey river with beryl-green reflections breaking into snow-white foam (a faint spray drifts across the

61. THE RIPON FALLS, FROM BUGUNGU

sun-lit vegetation like blue smoke), and then spreading away in the foreground into a yellowish turmoil with creamy crests and nut-brown hollows. Over all is a sky of pale azure, across which cloudlets nearly as white as the foam of the falls slowly travel before the lake breeze. Here and there on the opposite bank, where the ground is not green with the richest vegetation the bare rock or soil gives a pleasant warm touch of reddish ochre to a scheme of colour which might otherwise be too monotonously blue, green, and white. If you include a foreground where the Bugungu downs overhang the foaming depths, there is long grass, with a silky sheen and bright mauve and yellow flowers, while the many birds and butterflies give flashes of light and colour as they flit to and fro.

The northern coast of the Victoria Nyanza from Kavirondo Bay to the western confines of Uganda is fringed with a chain of islands large and small. Some are mere guano-covered rocks, sticking up like white pinnacles, and crowned with cormorants. Other are strange assemblies of water-worn boulders piled one on top of the other like a ruined temple of megaliths built by some Cyclopean race. Indeed, to use simpler diction, I might say that these islands of naked boulders reproduce over and over again excellent imitations of Stonehenge. Of this character is Dolwe Island, far out in the lake, in its north-east corner. Dolwe has pleasant sandy

62. THE RIPON FALLS, FROM BUGUNGU

coves, fine shady trees, and a good deal of native cultivation; but much of its attendant islets and rocky shores consists of these extravagant piles of boulders, on which are sometimes poised erect monoliths. Many a picture might be painted here. The clean water, absolutely clear of sediment on this rocky coast, is deep, untempered ultramarine. The boulders are a cool, clean pale grey, glistening in the sunlight, polished by some past attrition. Others, standing out in the water as strange pinnacles, are snow-white with the guano of ages. They are perched on by cormorants of black-green with white breasts. Peeping through these natural Carnacs and Stonehenges, one may catch many a pleasing glimpse of bright green verdure and golden sandy cove looking towards the milder aspects of the

island. These extraordinary heaps of water-worn boulders of granite, which may be seen in so many parts of the northern half of the Victoria Nyanza, will probably tell a tale of interest to the geological student who is capable of reading their riddle.

Other islands of the northern Victoria Nyanza are little worlds of themselves, are the size of an English county, possibly. Of such is Buvuma, which lies at the entrance of Napoleon Gulf not far from the birth of the Nile. Buvuma is shaped very much like the Island of Celebes in the Malay Archipelago, and, like this island, has long, attenuated peninsulas studded with high mountains. In Buvuma these mountains in places reach

63. FOREST ON THE SHORES OF AN ISLAND

to heights of more than 2,000 feet above the level of the lake, heights which will prove valuable and accessible as sanatoria for white settlers on the Victoria Nyanza. The Island of Buvuma is of great interest. Its inhabitants belong to the same stock as the Basoga, and do not differ markedly in appearance or language from that people or from the kindred Baganda. But for 100 years or more there has been a deep-seated feud between the Bavuma and the Baganda. Many a king of Uganda has endeavoured to conquer Buvuma, and has failed, and sought an alliance instead. In this island the people have hitherto resolutely refused Christianity, and adhered to the old fetishistic religion, about which more will be said in Chapter XVI. The worship of these spirits is chiefly

Schizorhis zonura.

carried on by offerings of food and drink that are placed in little huts outside the villages, often in the dense forest. These grass huts are surmounted by a long peak or steeple made of sheaves of grass. Sometimes, however, the place for fetish offerings is a hollowed stone, and over this is suspended a large grass extinguisher, hung from the bough of a tree, and shaped like a reversed funnel.

64. COAST OF THE MAIN ISLAND, SESE

Some of the high land in Buvuma is rocky, and not unduly lush in vegetation; but there are patches of splendid forest and many of the villages near the lake shore are concealed in the emerald-green depths of vast banana plantations. So high do these bananas grow, so broad are their leaves, and so luxuriantly do they interlace in shutting out the sky, that you feel on entering such a grove as though you had been by magic placed in the heart of a gigantic emerald. The sunlight coming through the thick green leaves make all the white men's faces bear a ghastly pallor, while the exposed skin of the natives becomes a rich bronze-green. Many of the trees in the Buvuma forests produce an acid yellow plum, which when cooked with plenty of sugar makes a most agreeable conserve, and is one of the few fruits I have ever met with in Africa worth bothering about from a culinary point of view. This fruit is in all probability derived from a species of *Parinarium*. It is a very distant relation of the plum family. These fruits attract large numbers of a bold, noisy bird, a species of turaco or plantain-eater, which is in all probability the more generalised type from which the splendid blue plantain-eater (*Corythæola*) originated. The colours of this *Schizorhis* (*S. zonura*) are as depicted in my illustration—a rather striking mixture of deep umber, black, white, ash-colour, and greenish grey, and the beak with its lemon edged with red makes a bright note of colour. But for the bird's noisy habits its coloration would be very protective, as when he keeps still amongst the branches he cannot be distinguished from their brown, grey,

black, and white; while his lemon-coloured beak looks like a ripe fruit. But like all his tribe, he is noisy and impudent, and seems to be impelled to call observation to himself by his shouts and antics.

The wild-flowers on Buvuma are often very striking. The scarlet *Erythrina* of the mainland is replaced by a climbing species which bears clusters of velvety bean-flowers of the palest pink—extremely beautiful. The whole of this remarkable island is well worth a separate study at the hands of a European naturalist, as I am sometimes disposed to think that its vegetation, birds, and insects offer indications of the island having been isolated some time from the mainland and having acquired or retained peculiar forms.

65. NATIVES OF THE SESE ISLANDS

Many of the islands of the Victoria Nyanza are covered with the densest forest, and will be of great value in supplying fuel for steamers. A great deal of this forest also produces valuable indiarubber, while the landscapes it forms in combination with green downs of short grass, sandy coves, blue inlets of the lake, and pretty villages will certainly delight the future tourists that the railway will bring to the shores of the lake and comfortable steamers convey to these exquisite archipelagoes, these

Summer isles of Eden lying in dark purple spheres of sea.

Of such is the Sese Archipelago, which, though belonging politically to the Uganda Province, may more fitly be described here whilst I treat of the lake and its islands in general, the more so as there is a certain kinship between the people of Busoga and of all these islands of the northern half of the lake, a kinship of race and dialect. The Sese Archipelago consists of one very large island that is nearly divided in the middle by a narrow isthmus, about eight or nine smaller islands which are inhabited, and almost uncounted islets and rocks too small or too barren

for habitation. The land often rises on these islands to considerable heights above the lake level—imposing downs covered with short emerald-green grass. Along their shores, and in the valleys between the downs, there is extremely rich forest. The Basese are great fishermen, and make long and daring voyages in their red canoes. These are similar to the canoes of Uganda, and are made of adzed planks of soft wood fastened together with leather thongs and caulked.

The only large mammal on the Sese Islands is that strange marsh-dwelling antelope (or, as I prefer to call it, tragelaph) which was first discovered by Speke, the *Limnotragus spekei.* This is a creature covered with long, weedy, chocolate-grey hair, with white spots about the jaws, and horns like a bushbuck's, only much larger. I shall have more to

66. SPEKE'S TRAGELAPH (*LIMNOTRAGUS SPEKEI*)

say of this creature in dealing with the zoology of the country. It still frequents, though in much reduced numbers, certain uninhabited islands in the South Sese group. Soon after the establishment of the British Protectorate it came to the knowledge of two English officers who were employed in connection with a surveying expedition that these antelopes were to be found in numbers on some of the Sese Islands. They accordingly came here in canoes, landed on the island, and killed, the natives report, over fifty of these creatures, for no other purpose apparently than the mere pleasure of slaughtering a rare and defenceless animal. A few heads were taken away as trophies, but for some time the whitening bones of the uselessly destroyed antelopes testified to an unfortunate episode in the history of this animal, which in earlier days, the natives say, was quite a marked feature of the archipelago, swimming to and fro between the islands. Since this sporting expedition Speke's tragelaph has been

placed on the "Wholly Protected" list, and may not now be killed without a special licence.

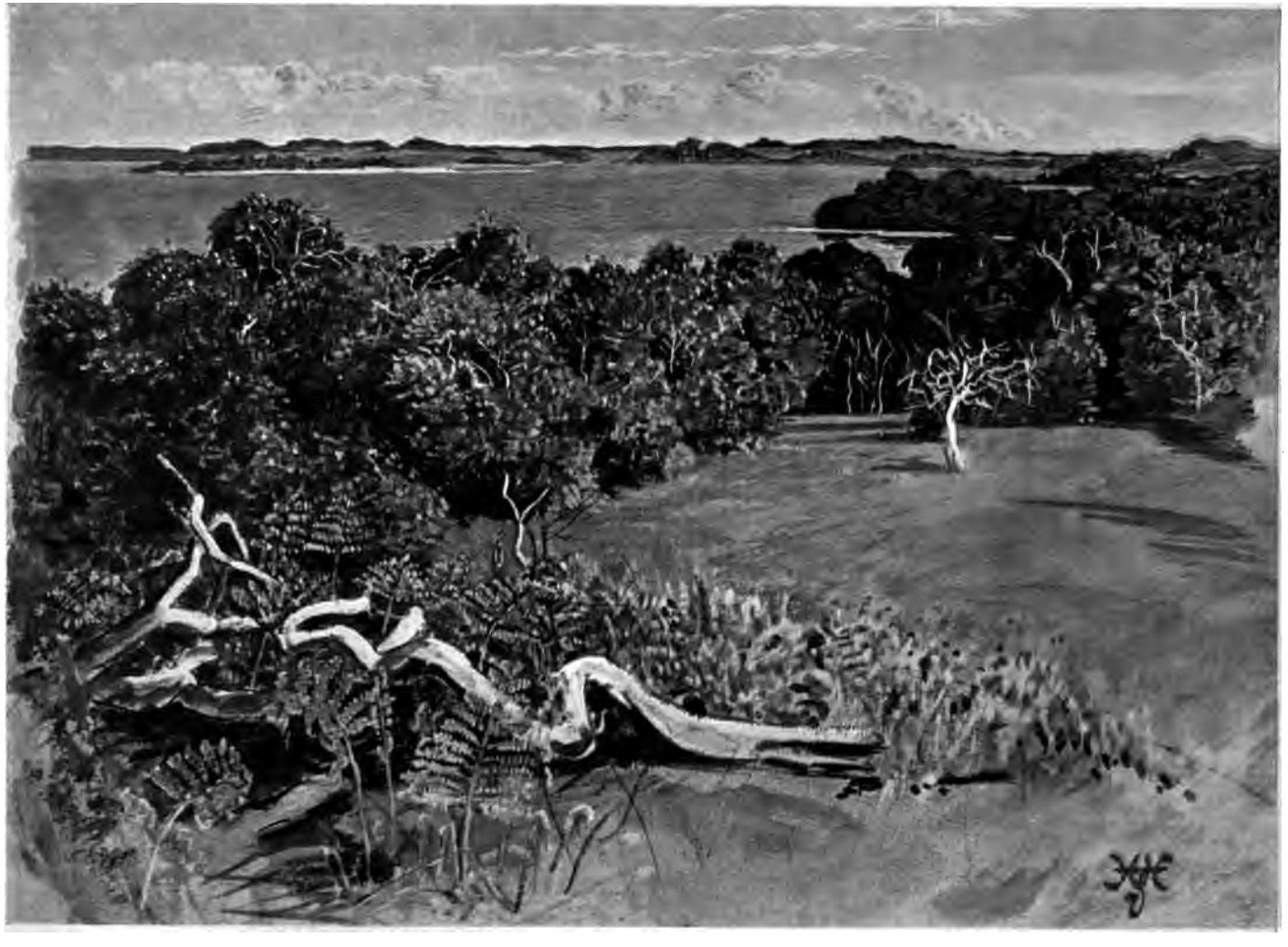
When tourists flock in numbers to the Victoria Nyanza, steamer trips will certainly be made down the centre of the Sese Archipelago. The

67. A CREEK ON THE VICTORIA NYANZA

waters of the lake are calm in these sheltered passages, and are deep blue. The islands often rise high from the water's edge, and exhibit all tints in the gamut of green, from the dark black-green of the primæval forest to the emerald green of the banana plantations and the pale greenish yellow of the higher downs where the grass is short. In places where the rock is exposed it is generally a grey granite. Chocolate and white fishing eagles, fawn-coloured Goliath herons, and bronze-tinted darters frequent the trees overhanging the water. Sandy coves are dotted with couples of the *Nettopus*, or Pygmy goose, an exquisite little bird, as gaily painted as a mandarin duck, which I have illustrated in another part of this book.

Besides the islands already placed on the map, and which it will be noticed are never very far from the mainland, all round the lake there is a legend that an island or group of islands exists in the very centre of the Nyanza. The entire surface of this great lake (some 27,000 square miles in area*) has never been thoroughly explored yet. Owing to the

* Some authorities give the area at 26,900 square miles, but as not all the gulfs are properly explored yet, this estimate cannot be regarded as final.



"Summer Isles of Eden set in dark purple spheres of sea."

(The Sese Islands.)

dangerous storms and rough seas which prevail on the open water, and to the fact that it is not much more than a year since the first sea-going steamer was launched, voyagers, both European and native, have been careful to hug the coast—or, rather, the chains of islands—as closely as possible in making journeys from one point to another, this being done so that the canoe, steam-launch, or sailing vessel might be able in rough weather to run for shelter. Consequently the lake has never been deliberately crossed yet over its open waters from north to south or east to west. Europeans and natives, however, who have at times been driven far out into the centre of the lake by strong winds declare that they have sighted unknown islands, and have found them inhabited by naked savages of hostile aspect. There are also persistent stories amongst the natives that the waters of the Victoria Nyanza are inhabited by a monster (known to the Baganda as "Lukwata"). This creature, from the native accounts, might either be a small cetacean or a large form of manatee, or

68. AMBATCH-TREES (IN FOREGROUND)

more probably, a gigantic fish. So far, however, only one European has caught a glimpse of this creature.* Some of the natives identify it

* Sir Clement Hill crossing the Nyanza in 1900 on a small steam-launch was nearly capsized by some monstrous water-creature which seemed to have a large square-shaped, fish-like head.

with certain whirlpools amongst the islands in which large canoes can be sucked down.

Compared to Tanganyika and Nyasa it would seem as though the Victoria Nyanza was a relatively shallow lake. The deepest sounding yet taken shows only a maximum depth of 240 feet. On smooth rocks like those of Dolwe Island there is a very well-marked water-line about six feet above the average height of the lake at the present day. In the absence of any discernible water-line at a higher elevation, or the traces of ancient beaches, it would seem as though the lake at the present day was not much more than six feet below the highest level to which it has ever attained.

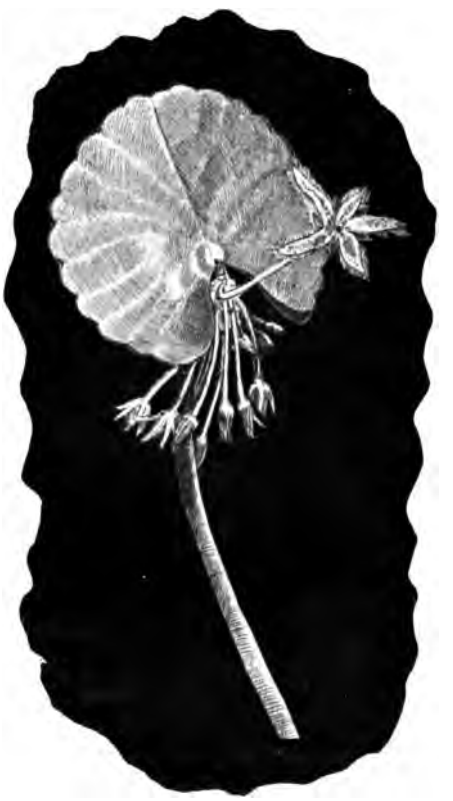
In the quiet backwaters of the Victoria Nyanza, where the movement

69. WATER-LILIES, VICTORIA NYANZA

of the water into waves is checked by papyrus or sandbanks, marsh vegetation is rapidly taking possession of the shallow water and choking it up. Many a creek or bay marked as such on the map now presents no water surface to the eye, but is a mass of bright green marsh. There collects first of all in these sheltered waters that pretty floating plant, the *Pistia stratiotes*, the appearance of which is like a small cabbage or lettuce floating on the water. This *Pistia* sends out horizontal straight roots like cords. From the end of the root springs up another plant, which again shoots out a horizontal root, and so in a short space of time a pool may be covered with a network of *Pistia stratiotes*, and even be a very pretty object to look at, for this water-plant—allied to the duck-weeds and arums—is of a bright bice green, powdered with a sort of bluish bloom. Then a long grass begins to grow far out into the

sheltered water, its stems being something like fifteen or twenty feet long when the portion which is under the water is added to that which is above the surface.

The ambatch next makes its appearance. This is a species of bean with large flowers of absolute orange. In growth the ambatch has a gouty, swollen grey trunk of pithy wood, a fibrous substance which is so light that rafts are made of it by fishermen and others for paddling about on some of these lakes and on the Upper Nile. The ambatch plants swell as they grow, and finally make quite a wall or breastwork of pithy wood, behind which masses of floating vegetation collect. Here you have a very frequent form of sudd, a constant obstruction in sheltered waters with a sluggish current. These inlets and gulfs of the Victoria Nyanza, as in most other African lakes, are covered with water-lilies. These are either that beautiful blue lotus-flower of India or a white water-lily scarcely distinguishable from that which the Romans introduced into England. Another kind, with leaves much like those of the ordinary *Nymphæa*, has curious blossoms of bright sulphur-yellow which look as though they were made of fleecy cotton-wool. These flowers are quite unlike in appearance those of the ordinary water-lily type. A bunch of long buds grows at the end of the stalk, coming up from the bottom of the water. The buds remain below water till they are about to blossom, when they revolve on their axis and erect themselves above the water, blossom into their bright sulphur-coloured star, then droop and turn down the opposite side, having revolved through more than half a circle. In this way one never sees on the surface either a bud or a withered flower, nothing but the yellow fleecy stars of the perfect blossoms dotted in and out of the card-plate leaves of green tinged with copper.



70. YELLOW WATER-LILY ON THE VICTORIA NYANZA

There are several characteristic creatures which haunt these acres of water vegetation, both on the indented shores of the Victoria Nyanza (in its northern portion) and in the not dissimilar marshes along the Victoria Nile and in the interior of Uganda. There is that strange bird with the monstrous head—*Balæniceps rex*, a grotesque development of a primitive type half-way between stork and heron. This creature, with blue-grey-ash-colour plumage, and an enormous shoe-shaped beak of mottled red and yellow, with its ridiculous little twisted crest at the apex of the monstrous head, and its huge eye of pale yellow, its upright carriage and solemn demeanour, is one of Nature's efforts at humorous expression.

The dapper little lily-trotter (*Parra*), which is a peculiar development of the plover type with a body shaped like that of a moorhen (chocolate-brown, greenish-black, and cream-colour), the legs of a coot, and toes which have developed enormously lengthened claws (so that the bird is able to spread these spider-like feet over the surface of the water vegetation, amongst which it hunts for the insects on the thick leaves); the water antelope, with its twisted horns and shaggy hair of reddish grey; the otter, of golden-brown with a white belly; the crocodile, lying in ambush either for human being, antelope, or fish; and, amongst many odd fishes, that extraordinary lung-fish locally known as the "mamba," a type which has descended almost unchanged from the Carboniferous Epoch to the present day, are examples of characteristic forms found in the Nyanza marshes.

The papyrus rears its apple-green jungles on all the sheltered swampy shores of the lake. What can exceed in its own kind the beauty of this rush—the long, smooth green stem, not completely round, but in section like a U, with one flat side; the mop-head of exquisite, silky, uncountable filaments, which bifurcate into even finer threads near their termination, of the purest green, and glistening with a bluish gloss? When the rush-head flowers there are little flat cones of pale gold inflorescence fixed in pairs among the uncountable barren filaments. This inflorescence forms a nimbus of gold arched over an *aigrette* of green. No wonder the Egyptians never wearied of drawing the most beautiful of the rushes, the pith of which may still provide us with paper, since the *Papyrus antiquorum* grows in enormous quantities throughout tropical Africa from the Zambezi to Fashoda, and from Zanzibar to Senegal.

If you are quietly paddling in a canoe through these solitudes of the lake shores—or, for the matter of that, near native villages, for he is not shy—you may often come across a huge sun-dried crocodile of blue-grey and sickly green, with dull black patches or spots, lying on the sandy shore (his head, it may be, resting on a grassy bank), fast asleep, or at any rate somnolent, in the delightful warmth, his dull reptilian brain

71. THE GREAT VICTORIA NYANZA

suffused with vague delicious reminiscences of toothsome meals on decayed corpses. As often as not this sleeping, smiling monster is being solemnly gazed at by stiff, prudish egrets of snowy white, or by the round yellow eyes of a whale-headed stork. Crocodiles would appear to exercise a certain fascination over water-birds, who, so far from shunning them, will inspect their sleeping forms basking in the sun, or stand about in groups amid the grim saurians pluming themselves, and even snapping at the flies attracted by the tainted muzzle, offensive still with the carrion on which it has just been feeding.

The Victoria Nyanza is approximately 270 miles long in its greatest length from north to south, and 225 miles broad from its farthest western to its farthest eastern extension. In either direction it is possible to steam nearly 200 miles without sighting land. Nevertheless, its coasts are fringed with many archipelagoes and large islands. These are arranged (especially along the shores of the northern half) in such a way as to create a fairly well-protected channel of an average twenty miles in breadth between the coast of the mainland and the outermost chain of islands. The existence of these islands as breakwaters between the broad open lake (where waves as big as those in the English Channel can arise) and the coasts of the many lands which border the Victoria Nyanza has been an important fact in facilitating the navigation of the lake by means of canoes and small sailing vessels. Up to the time of writing no vessel (I believe) has ever deliberately crossed the open water of the lake in a direct line from north to south and east to west. Journeys have always been made within sight of the islands or the mainland shore, except in one or two instances where heavy gales have blown daus out far into the middle of the lake, where they have either foundered or managed to regain smoother waters much damaged. A journey right across this lake from Napoleon Gulf on the north to the Gulf of Bukumbi on the south would be almost equivalent in length to a sea journey from Cork to Liverpool, and weather quite as rough and seas as high might be met with as in the Irish Channel.

In the rainy seasons formidable waterspouts occur on the lake, and are often visible from the shore. On the outer islands of the Sese group, the waves which break on the rocks after a high wind constitute a surf almost as dangerous as that which might dash itself against Welsh headlands. The water of the lake is a wonderful deep blue (except in the stagnant Kavirondo Bay). It is absolutely sweet and good to taste, without any of the saline flavour of the two Albert Nyanzas or of Tanganyika.

THE WHALEHEADED STORK AT HOME.

CHAPTER III

THE KINGDOM OF UGANDA

THE Province or native Kingdom of Uganda includes (besides the Sese Islands which were briefly described in the last chapter) all that part of the Protectorate which is bounded on the east by the Victoria Nile and Lake Kioga, on the north by the marshy River Kafu, the Ngusi River, and a corner of Lake Albert, on the west by the Misisi River and by a line running in zigzags from the Misisi southwards to the German frontier at the first degree of south latitude. With the exception of a portion of this country bordering on Unyoro in the north, there is a remarkable similarity about all the landscapes in Uganda. There are rolling green downs rising in places almost into mountains, and every valley in between is a marsh. This marsh is often concealed by splendid tropical forest. Sometimes, however, it is open to the sky, and the water is hidden from sight by dense-growing papyrus. Standing on one of these innumerable grass-covered hills in Uganda, you look from your dark green and chocolate-red eminence on to a broad expanse below, which seems at first to be a smooth greensward, but is in reality a marsh of half a mile in breath.

This is a country intended for switchback railways. The broad native roads make as straight as possible for their mark, like the roads of the Romans, and, to the tired traveller, seem to pick out preferentially the highest and steepest hills, which they ascend perpendicularly and without compromise. It is impossible to ride up or down many of these hillsides, and difficult enough to walk. Yet the chocolate-coloured road surmounts a hill and plunges down into the inevitable marsh or forest, which it crosses on a long causeway of white sand built up between stakes and a basketwork of lath. After the hot sunshine, which has played on the traveller's back as he toiled up the hill, with its red soil and very green grass, the plunge into the cool depths of forest, with their innumerable palms, wild bananas, and soaring trees with white trunks, gives a delightful sense of relief, and he is sorry when the pretty causeway of white sand comes to an end, and he must toil once more up the opposite bank of red clay. I am afraid the country being of this nature it will prove extremely expensive to

construct a railway across it, though a short railway from the coast of Uganda to Ruwenzori and the south end of Lake Albert would be of immense

72. MARSH IN UGANDA (WITH NATIVE CAUSEWAY)

value in opening up easy communications with the Congo Free State and the Egyptian Nile.

The north-western parts of Uganda have not so many marsh valleys, and the green downs become picturesque rocky hills whereon crags make wonderful imitations of ruined castles. In the Districts of Singo, Bwekula, and Bugangadzi the scenery is charming—downs of short thick grass crested and dotted with trees, with acres and acres of wild-flowers, a single tint—mauve, yellow, blue, or pink—prevailing. To the north-east the country becomes more marshy, and however beautiful the papyrus may be individually, one soon grows weary of these endless marshes filled

with millions of mosquitoes. Indeed, Uganda as a country has one fault in that there is scarcely a part of it without mosquitoes, and these sometimes belong to the fever-dealing species *Anopheles*. Much of Uganda was once unbroken tropical forest, and even at the present day there remains in Kiagwe, the easternmost district of the province, a dense forest of considerable extent, the recesses of which have never been explored by a European. In this forest, until quite recently, chimpanzees were found, and the inhabitants seem to have been originally of the Congo Pygmy type.

Few people of any imagination or sense of the beautiful and stupendous can fail to be impressed by tropical forests such as those of Brazil or of parts of Western and Central Africa. These forests have little of the tender grace of an English beechwood, nor do they ever convey that exhilaration

73. FOREST BY THE SHORES OF THE VICTORIA NYANZA

of the pines. Amazingly beautiful they may be in patches and clumps, but more often than not their grandeur and beauty is combined with a

74. FOREST IN UGANDA

certain dreadfulness. The European, in fact, feels, consciously or unconsciously, that he is out of his element and his age, that, as in Mr. Wells's suggestive story, "The Time Machine," the wheels of time have been reversed for him, and he has been transported back to a past epoch in the earth's history, before this planet was fitted in its atmosphere and surroundings for the presence of modern man. I am greatly interested in botany; as a painter I love almost more than anything else the forms of vegetation, the effects of sunlight streaming through many different tints of green, the gorgeous flowers on tropical trees, the black masses of mouldering wood, the gleaming white columns of aspiring trees, the emerald cascades of innumerable tiny leaflets, and the huge bold designs in individual leaves and fronds that can be measured in feet and yards; yet somehow or other I feel oppressed and disquieted in these African forests.

Apart from the real but temporary annoyance of biting ants, or the occasional danger of death from a puff-adder, there is a certain atmosphere exhaled from this tremendous development of vegetation which must be deleterious to a white man's health, perhaps containing too much carbonic acid—the atmosphere of the Tertiary, and not of the Quaternary, Epoch. Unless, too, there be a broad road traversing the forest (in which case one is much more cheerful, and the pure beauty of the scene appeals to one much more vividly), there is a nightmare feeling as one tries to force a way through the dense undergrowth. The indiarubber vines scale the highest trees and launch their thick ropes in loops and in sheer descents. Sometimes the straight liana ropes are made beautiful by a lateral outgrowth of glossy leaves and white scented blossoms. Sometimes their contorted loops and twirls and snake-like coils give one the impression that not a few botanists are beginning to entertain of the existence in

75. THE LIANAS OF THE RUBBER VINES, UGANDA FOREST

plants of a dim soul, of sentience, which might even include in its manifestations a humorous delight in extravagance of form.

Some of the forest trees of Uganda offer magnificent displays of flowers.

76. *ERYTHRINA* TREE IN BLOSSOM

There is one, the *Spathodea*, with crimson-scarlet flowers larger than a breakfast-cup, and not very dissimilar in shape. These flowers grow in bunches like large bouquets, and when in full blossom one of these trees aflame with red light is a magnificent spectacle. Other trees present at certain seasons of the year a uniform mass of lilac-white flowerets, as though they had been powdered from above with a lavender-coloured snow. The indiarubber-trees and lianas have white flowers, large and small, with yellow centres exhaling a delicious scent like jasmine, but the blossom of one of these rubber-trees is vivid scarlet. The *Lonchocarpus* trees have flowers in colour and shape like the *Wistaria*; from the branches of the lofty eriodendrons depend, on thread-like stalks, huge dull crimson flowers composed of innumerable stamens surrounded by thick carmine petals. The *Erythrina* trees on the edge of the forest seldom bear leaves and flowers at the same time. When in a leafless state, they break out into a crimson-scarlet efflorescence of dazzling beauty. The *Pterocarpus* trees have large flowers of sulphur-yellow. Many creepers have blossoms of

orange, of greenish white, pink, and mauve. Some trees or creepers (*Combretum racemosum*) are like the *Bougainvillia*, throwing out wreaths and veils and cascades of the most exquisite mauve or red-violet, where the colour is given by bracts, the flower itself being crimson and of small size. Blue alone appears to be missing from this gamut of colour in the forest flowers, though it is frequently present amongst herbaceous shrubs or plants growing close to the ground, and so far as the trees are concerned, is often supplied by the beautiful species

77. DRACÆNAS, UGANDA FOREST

of turaco that particularly affect the forest, and by large high-flying butterflies.

The woodland of tropical luxuriance ascends in Uganda to a height of

78. WILD BANANA, UGANDA FOREST

about 6,000 feet above the sea. At this point it begins to admit forms not specially characteristic of the equatorial zone, such as dracænas and tree-ferns. The dracæna is a very striking object in these Uganda forests. It is really a tree-lily related to the yuccas and aloes. This tree branches, and has at the end of each long whitish green stem a great tuft of sword-like leaves. From out of these tufts spring long drooping green stalks covered with numerous buds, which open into white lily-like flowers, these again giving place to red or yellow berries. The dracæna is much in favour amongst the natives of Uganda for forming hedges, as sections of it stuck into the ground take root easily. Wild bananas are found abundantly in these Uganda forests. They are very handsome objects in the landscape, owing to the bright grass-green of their enormous leaves and the orange-red midribs of these huge fronds. Unlike the cultivated banana, the fruit has no sweet pulp—merely a little white pith—and when ripe, produces large, round, slightly flattened seeds of glossy black, which are in much request in some parts of Africa as ornaments or charms.

Another object of beauty in the Uganda forests is the raphia palm, which I have not seen elsewhere in this Protectorate, though it is a very common object in British Central Africa. The fronds of the raphia are the largest met with in any palm. My photographs will give a better idea than any amount of verbal description of its enormous raceme of dusty inflorescence, which turns to an untidy drab-coloured network containing innumerable shiny chestnut-brown cones.

However common the wild date palm may be in these regions, it is

79. RAPHIA PALMS, UGANDA FOREST

always a most beautiful object in the forests. The stem is long, slender, and pliant—that is to say, the palm does not hold itself rigidly straight, but droops forward somewhat. The slender, swaying grey stem is crowned with a noble *gerbe* of regularly curved fronds of the deepest, richest green, turned to green-gold when the sun shines through them. The stalks of the palm near the centre, from which they spring, are often orange coloured, and the three or four flowering branches are a vivid orange-yellow in all their ramifications, the fruit succeeding the whitish yellow flowerets being a bright orange when ripe, so that from a little distance the general impression one derives from these palms is a grey stem, an orange oriflamme at the head of the stem, from which radiates a horseshoe of graceful pinnated fronds of the greenest green.

Whatever may be the case in the Congo basin, where the forests often appear sadly lifeless, these woodlands of Uganda are full of colour and noise from the birds, beasts, and insects frequenting them. Monkeys are singularly bold, and frequently show themselves. There is the black and white colobus with the long plume-tail which has been already described; there is a large greenish black *Cercopithecus*, and another species of the same genus which is known as the White-nosed monkey. This is a charming creature of bright colours—chestnut, blue-black, yellow-green, and grey, with a snow-white tip to its nose. I believe its specific name is *rufoviridis*. The bright-coloured turacos which have been mentioned in connection with Busoga are even more abundant in these Uganda forests, and there are green and red love-birds, grey parrots with scarlet tails, and the usual barbets, hornbills, shrikes, fly-catchers, bee-eaters, rollers—all of them birds of bright plumage or strange form.

There are other forest creatures that are not harmless sources of gratification to the eye. Lying amongst the dead leaves on the path may be the dreaded puff-adder,* with its beautiful carpet-pattern of pinkish grey, black, lemon-yellow, and slaty blue, and with its awful head containing poison glands more rapidly fatal than those perhaps of any other viper. Numerous pythons, from fifteen to twenty feet in length (generally disinclined to attack human beings, however), are coiled on the branches of the trees, or hang by their tails like a pendent branch swaying to and fro in the wind. Their chequered patterns of brown and white are rendered very beautiful sometimes by the bloom of iridescence which imports rainbow colours into the scales when the skin is new. The pythons may be disregarded as a dangerous element to human beings, and the puff-adder, though his bite may kill you in an hour or less, is too sluggish to attack, unless by some blunder you tread on him and wait to see the consequences. Therefore the snakes are far less an

* *Bitis gabonica.*

"DEATH"—THE GABOON PUFF ADDER.

(*BITIS GABONICA.*)

annoyance or an impediment to the exploration of these forests than the

80. RAPHIA PALMS, UGANDA FOREST

biting ants. These creatures are a veritable plague in moist, hot regions where there is abundant vegetation. I suppose they are sometimes at

home and resident in their underground labyrinths, but they are a restless folk, for ever seemingly on the line of march. They traverse forest paths in all directions along causeways of their own worn in the soil by the passage of their thousands. When you come across one of these armies of ants in motion, on either side of the main stream, which is perhaps only half an inch broad, there may be a couple of feet of biting warriors in a swarming mass on either side of the rapidly marching army of workers carrying *pupæ*. Sentinels are out far and wide in all directions, and if you pause anywhere within a few feet of this marching

81. WILD DATE PALMS (*PHŒNIX SPINOSA ?*), UGANDA

body of ants you will very soon feel the consequences in a series of painful nips as though from red-hot pincers. These warrior ants know no fear. They attack any creature which comes near their line of march, burying their powerful mandibles in the flesh, and will then let the head be torn from the body sooner than give way.

A description of Uganda would not be complete without a picture of the banana groves which, from an agricultural point of view, form the distinguishing feature of this country. The cultivated banana is possibly not native to Africa in its origin. I believe botanists consider that it

first diverged from wild forms of *Musa* in Eastern Asia, and like all the other food products cultivated by the Negro, travelled to tropical Africa from India at some pre-historic period. I, too, held this opinion once, but I cannot endorse it so heartily now, on reflection. I believe there is no record of the banana having been known to the ancient Egyptians.

82. THE BANANA OF UGANDA (ONE OF THE THIRTY ODD VARIETIES)

Its scientific name, *Musa*, is of course only a Latinising of the Egyptian-Arabic word *mūs*, and Muhammadan Egypt only knew the fruit in the Middle Ages.* Therefore it is not very likely that the cultivated banana reached tropical Africa from Asia, by way of Egypt, since its introduction

* The word "banana" was, I believe, introduced and spread by the Portuguese, and is possibly derived from a West African word.

to Negroland would be almost too recent to explain its long connection with Negro life as testified by linguistic evidence; neither is it easy under present climatic conditions to conceive of the plant having been cultivated from Western India through Southern Persia and right across sterile Arabia. Was it by any possibility brought by some navigating people like the Phœnicians or Sabæans across the Indian Ocean, and started as an introduced plant on the east coast of Africa, thence to spread right across the continent to the Atlantic Ocean?* Could it be possible that the immigrants of Malay races, speaking languages allied to the Polynesian stock, who at unknown and distant periods drifted across the Indian Ocean from Sumatra and Java to Madagascar, brought with them clumps of banana roots? The idea seems extremely improbable.

The cultivated banana, it must be remembered, produces no seed, and therefore can only be propagated by dividing the roots. Each year the banana, which in the botanical system is not very far off the orchid group, sends up, like an orchid, a fresh stem from a new root, while the old one, after flowering and fruiting, dies. Did the Arabs introduce the cultivated banana from Eastern Asia into East Africa as they did into Egypt? If so, they could only have done this—even if they did it before the Islamic period—as far back as about 2,000 years ago. If this was the means of its introduction into tropical Africa, then in that relatively short period it has spread over all the tropical regions of the continent as a cultivated plant. Of course I am fully aware that several wild species of *Musa* are indigenous to Africa, as others are to Madagascar. Is it quite impossible that none of these indigenous species of *Musa* could have originated the cultivated form of the African banana? The fruit of all these wild species differs from the cultivated fruit very markedly in developing large black seeds which are embedded in a pulp that not even an anthropoid ape could eat with any pleasure. Is it possible that the slightly bitter, dry, tasteless white pith surrounding these large inedible seeds could have been any attraction to primitive man in Africa, so that he protected and fostered one of these species of *Musa* until it

* An allied problem is the distribution of the cocoanut palm, the origin of which, judging by its nearest relations in the palm family, was in the Pacific Islands. It is quite possible to understand the cocoanut palm having been introduced all along the east coast of Africa, where it is so abundant, by Malay, Phœnician, Indian, Persian, Chinese, Portuguese, Arab navigators, but how did it reach the west coast of Africa? The cold of the Cape peninsula would not permit of the cocoanut travelling round the south end of the continent back to the tropics along the west coast. Yet apparently the Portuguese found it growing on the west coast of Africa when they first travelled in that direction. Possibly, however, it was introduced by them after all from Brazil to the west coast, in which case it has spread up and down the coast with remarkable rapidity.

83. A BANANA PLANTATION

84. "HAPPY UGANDA!"

developed into the cultivated banana exactly like the cultivated banana separately developed in Eastern Asia?

It would, in any case, be difficult to make a Muganda of to-day believe that his beloved food substance, which provides him with a mass of nourishing vegetable pulp, with a dessert fruit, with sweet beer and heady spirit, with soap, plates, dishes, napkins, and materials for foot-bridges,* was not always indigenous to the land he dwells in, and of which it has become the distinguishing feature.

The banana, as most of my readers are aware, belongs to an order of monocotyledonous plants called the *Zingiberaceæ*, to which belong the cannas and the root producing ginger. The flower grows on a long stalk

85. REED FENCES IN AN UGANDA TOWN

proceeding from the highest part of the plant (the stem of the banana may grow in fertile districts to a height of twenty feet above the ground). The corolla of the flower, with its poorly developed petals, is yellowish white, but it is to a great extent concealed from sight behind a huge spathe of purple. As the flower is fertilised, this spathe draws back and falls off. There is, however, always a considerable space of bare stalk between those flowers which have been fertilised, and are producing fruit, and the end of the stalk, where the last flowers remain in a heart-shaped bulb of purple spathes. A bunch of bananas with the great purple tassel at the end of the stalk makes quite a beautiful object to paint, from the contrast between the fat, smooth yellow-green fruit above and the purple-

* In the western parts of the Uganda Protectorate long pipe stems are made out of the stalks of banana leaves.

red knob at the end of the stalk below. The leaves of the bananas are the most lovely green that exists in nature. When young, or when semi-transparent, with the sunlight behind them, they offer a brilliant grass-green to the eye. The upper surface of the leaf in its prime, however, is blue-green, and the blue sheen is produced by a delicate bloom, which also veils the bright colours and contrasts of the stem with a scumbled softening of tints. The main stem of the full-grown tree is often glossy black. Even the old and tattered fronds are beautiful by the vivid yellow or bronze-black tints they assume. A banana plantation, therefore, is a feast of colour for the eyes. It is also a source of joy and comfort to

86. KAMPALA (A SUBURB OF MENGO)

one's hungry porters from the assurance of satisfying food which it supplies.

I wonder whether any of my readers remember fantastic pictures by an Early Victorian painter (? Martin) who flourished in the 'forties of the last century, and illustrated religious subjects, derived in great measure from the inspiration of Milton's *Paradise Lost* and *Regained*. His works were much perpetuated by engraved reproductions. One of these was called "The Plains of Heaven." It exhibited a Turneresque landscape of untrue perspective, with those vague, unclassified trees so untruthful in drawing to which Turner was addicted. Streams of water flowed without any regard to the law of gravity, and a Turneresque shimmer in the

87. GRASS . . . IN UGANDA !

atmosphere disguised other faults in drawing. In and out of these groves and bosky hollows, and along the banks of the heavenly streams, promenaded an innumerable company of the Blessed, as vague in drawing as the landscape, chiefly characterised by long flowing garments of white, which did away with the necessity for the correct delineation of any limbs.

If this picture has been seen in its original or as an engraving by any one visiting Uganda, that country will seem over and over again like a black travesty of "The Plains of Heaven," wherein the Baganda move about like saints in long trailing garments. The peasants, of course, when they are hard at work in the fields or making long journeys, will reduce their clothing to a tucked-up bunch of bark-cloth, covering the middle of their bodies between the knees and the armpits; but even the poor people, whenever they can, delight to cover themselves with loose sweeping garments made, if they are old-fashioned, out of the red-brown bark-cloth derived from a species of fig-tree.* Since the country was opened up to the trade of the outer world, first by Arabs, and then by Europeans and Indians, it has been flooded with the white calico of England, India, and America. There is scarcely any Muganda now so poor but that he cannot afford to wear a long trailing shirt of white cotton or linen, with long sleeves, and in addition a kind of rope of twisted white calico (like a halo) fastened round the head. At great assemblies, in market places, before the churches or law courts, or the residences of chiefs, or when there is any high day or holiday, and the people come from far and wide to attend sports got up by Europeans, then you will be impressed with this resemblance of Uganda to "The Plains of Heaven": the fantastic vegetation of ultra-tropical richness with its palms and bananas, the gleaming water of lake, inlet, or swamp, the red roads, intensely green grass, brilliantly coloured flowers, and amidst this riot of colour and form the thousands of moving figures, clad mostly in white from head to foot, make up a picture which is scarcely a parody of Martin's subject.

The native capital of Uganda is, perhaps, best styled Mengo, that being the name of the king's quarter. It has been sometimes known in times past as Rubaga, from the name of one suburb, and Kampala, from the name of another, the last-named being the quarter in which the European Government offices are established. Mengo is like ancient Rome—only much more so!—a city of seven hills, as any one living there and obliged to move about knows to his cost. Each suburb or portion of the straggling town of some 77,000 souls is a hill or a hillock in

* Though it is considered the right thing in royal or aristocratic circles for the princesses or wives of the chiefs to wear bark-cloth rather than calico. The "royal" bark-cloth is often covered with striking and tasteful designs, roughly stencilled on it with a black dye.

itself, with an ascent or descent so steep as often not to be compassed on horseback. In between these hills or mounds there are bottoms of marsh, or there are marshy streams which slowly percolate through dense vegetation. Much of this, however, should be written in the past tense,

88. CAUSEWAY OR BRIDGE, UGANDA

for a good deal has been done by the civil and military officials stationed in the place to drain marshes, level roads, plant trees, and curb unnecessary herbage, so that the place is probably much tidier to look at and much easier to traverse than during my former visits there.

Yet sections of the town inhabited by the little king and his court, the native gentry, and the common people are clean and picturesque. Reed fences of a kind peculiar to Uganda, which, by the interlacing reeds, exhibit a bold pattern, enclose the ground on either side of the broad red road. Behind these reed fences are numerous courtyards in which

bananas grow, and at the end of each series of yards is the closely thatched residence of some family or household. Each house, as will be shown later on, has various subsidiary buildings attached to it. Everything bears a neat, swept-up appearance, and the handsome trees and general richness of vegetation round the dwellings make it a city of gardens. Along some of the roads there must be straight perspectives of one or more miles in length, and the breadth of the avenues has about it something royal and suggestive of a capital. Mission buildings, with cathedrals in brick and stone, or in humbler materials of cane, thatch, and palm poles, rise from three of the great hills which surround the little basin in which the smaller mound of Kampala is situated—Kampala, the hillock which was contemptuously given to Captain Lugard by Mwanga, and where the first seed was planted from which the British Administration over all these vast territories grew and prospered. To the east of Kampala rise the heights on which the military garrison of Indian and Sudanese troops is established. Here a strong and well-constructed fort has been erected, from which the whole of Mengo can be dominated. There is fast springing up about Kampala a town of Indian traders and a large Sudanese settlement. There are German stores, at which most articles needful to the European settler can be purchased, besides the well-provided Indian bazaar. The steep red roads radiate from Kampala in every direction, and up and over every one of the encircling hills. Yet Mengo is in some respects disappointing, for it is self-centred; it is difficult from any of the fatiguing heights around it to obtain any decisive glimpse of regions beyond.

Let us take an imaginary journey together in this Kingdom of Uganda in order that the untravelled reader may better realise the aspect of the country and the nature of its chiefs and people. We will suppose that we have left behind us the suburbs of Mengo, which extend almost as far from the centre of that capital as do the suburbs of London. The road is as broad as an English country road, quite different from the ordinary African path (which is barely the breadth of the space occupied by men walking in single file). The road is much rutted, and is seamed by gullies, owing to the way in which the heavy tropical rains cut up its soft clay surface. On either side of the road the grass grows high, perhaps to heights of seven or eight feet, but it is interspersed with gay flowering plants and shrubs. The road ascends a steep hill through this country of luxuriant grass. The hilltop reached and the descent begun, the traveller sees before him a broad marsh in the valley below. The descent to this marsh is possibly so abrupt that it is deemed wiser to get off the horse or mule and leave that beast to slither down sideways. At the edge of the marsh the road becomes a long narrow

A Landscape in Uganda (Bwekula).

causeway of white sand built up between stacks of palisades, which are further strengthened by rough basketwork. These causeways not having been originally constructed to be traversed by a man on horseback, the sandy loam which is heaped on a foundation of papyrus stalks and sticks has not a very sure surface. The horse or mule, or even the man on foot, may suddenly sink a foot down into this loose material, though there is very little danger of a broken limb. Out in the middle of the marsh a greater looseness of structure in the causeway no doubt permits of the

89. PAPYRUS IN AN UGANDA MARSH

slow percolation of the water, for these swamps are generally the beds of rivers nearly stagnant in their flow.

Looking on either side as the marsh is being crossed, the traveller will notice first of all the gigantic papyrus, which may be growing up as high

as fifteen feet above the water, and interspersed amongst papyrus roots are quantities of fern, of amaranth, or "love-lies-a-bleeding," and the gorgeous red purple *Dissotis* flowers, a yellow composite like a malformed daisy, and large masses of pink or lavender-coloured *Pentas*. There are also sages and mints which smell strongly of peppermint, and a rather handsome plant with large white bracts and small mauve flowers. In and out of this marsh vegetation flit charming little finches of the waxbill type. One of them is particularly beautiful, with a body of black, white, and dove colour, and a crimson back. The next ascent of the inevitable hill which succeeds the marsh may lead one through a more wooded country, where, amongst many other flowering shrubs, grows a species of mallow (*Abutilon*), with blush-pink flowers in clusters, like dog-roses in general appearance. The following descent into the swampy hollow may be one of those plunges into grand tropical forest which have been already described with ill-regulated enthusiasm—for the average reader who attempts to follow these descriptions may not be as deeply moved as is the author by these vegetable splendours.

Perhaps it is by now past mid-day, and the afternoon sun is cruelly hot. Between the traveller and the town of the nearest big chief where he intends to camp is a hill unusually high, and with such steep sides that most people are obliged to dismount and walk to the summit. Owing to the heat and the steepness of the ascent the climb is punctuated by peevish stops, during which the perspiration is wrung from one's brow. One sits down anywhere, anyhow, amidst the vegetation and fans a heated face ineffectually with a damp pocket-handkerchief. The traveller is here in a mood to make very depreciatory remarks about Uganda, and to wish that he had never set out on this particular journey. Making one more effort, however, the last part of the ascent is gained, and suddenly on the apex of the hill, under the shade of a beautiful spreading tree, one sees a sight which looks unreal in its opportuneness—a table spread with a snowy white cloth and set out with tea-things. One or more camp-chairs, according to the number of Europeans of the party; a group of smiling white-clothed attendants; a camp-fire over which a kettle is boiling; in short, all the requirements for a delightful tea-party just at that time of the afternoon when tea would be most welcome. All these preparations have been made without consulting the traveller by the chief or sub-chief of the district, very possibly not even the one he is going to visit. It has been guessed that the white man will find this hill the most trying point in his day's journey during the heat of the afternoon sun, and therefore this spot has been selected as the most suitable one to prepare tea to cheer him on his way. Very possibly one may only guess all this, as the attendants, like well-trained English servants, offer no conversation

90. FLOWERS ON THE EDGE OF AN UGANDA SWAMP

unsolicited; and with their inborn tact the chiefs are not there to worry you with compliments or greetings. The tea, therefore, is drunk—cup after cup, made with delicious fresh milk—gratefully and silently, and the traveller finishes the rest of his journey in a cheerful frame of mind.

The place where he will encamp for the night is probably a rest-house on the skirts of a large native settlement, or it may even be on the big open space where the weekly markets are held, or near to which

91. IN A SWAMP FOREST, UGANDA

the church or mosque has been erected. As one nears the camp, excited white-robed messengers come flying along the road three at a time, running as hard as they can to meet the European as he advances on horseback. "Chief So-and-so has sent us to greet you," they shout, besides adding many of the usual and elaborate Uganda greetings. The traveller bows; they wheel round and run back as hard as they came. A few hundred yards farther on, more messengers arrive with the same statement. The last of these that come remain with the guest, give him the news, and

A Causeway through swampy Forest: Uganda.

direct him to the place where preparations have been made for his camping. The ground has been cleared, or it may be that an unusually spacious rest-house has been swept out, its floor laid with fresh green grass, and every reasonable preparation has been made for the rapid installation of the tired travellers and their porters.

You have scarcely got into your temporary quarters before you hear

92. TEA ON THE ROAD, UGANDA

the noise of a great multitude. Any number of persons from twenty to five hundred, according to the importance and size of your caravan, are converging on your camp, loaded with bunches of green unripe bananas,* or smaller quantities of yellow ripe ones, carrying grass bundles in which are tied up sweet potatoes, these being now much cultivated by the chiefs. Other bundles contain beans, Indian corn, ground-nuts. Baskets of plump

* The native usually prefers the unripe banana *cooked*, as his mainstay.

fowls uttering a joyous cackle, unconscious of their coming doom, and paniers containing, it may be, hundreds of eggs, are being carried by other smiling folk, while small boys drive up recalcitrant sheep and goats. If you are a very big man, or the chief you are visiting is a very important person, it is as likely as not that a bullock or even a milch cow—four bullocks, four milch cows—may be added to this great gift of food. It is certain that if the chief has any cows and you are a European known to favour tea in preference to whisky, there will be gourds and baskets of fresh milk. I use the word "basket" advisedly, for the Baganda can weave basketwork so finely that they can in this way construct pottles to contain milk. The milk may also be brought in earthern pots or jars; in which case, although perfectly sweet, it will have a slightly smoky taste, owing to the manner in which the pot is cleaned from the remains of sour milk. Three or four headmen of extremely clean appearance, their eyes dancing with friendliness and their tongues uttering rapid salutations, will accompany this army of food-bearers. They will arrange the offerings in an orderly semi-circle, placing the more precious things before the door of your house or tent. After mentioning the name of the donor, they will salute and retire, having probably inquired what time it will be convenient to you to receive their chief. I never in all my travels in Africa encountered a people of more delightful native politeness and tact than the Baganda. Other natives and native chiefs quite as friendly will call upon you at the wrong time, bore you with questions, and rob much of their hospitality of its value by this waste of time and added weariness. It has never been so in all my experience with the Baganda.

If, after such a present of food, you are not a perfect brute (and perfect brutes are rather commoner among white men than black), you will not only give the chief an opportunity of calling on you, but will probably invite him to take tea or luncheon or dinner with you. He will arrive with a large suite, who, after salutations, will retire and leave him to your society; he will come clad in snowy white, with possibly a European coat or jacket over his long shirt, and his feet will be encased in handsome sandals of thick decorated leather, with bands of otter-fur. He will eat and drink with you with manners that offer no scope for fastidious criticism. During the meal, if you are able to talk with him in Swahili or Luganda, he will give you no end of interesting information, but he will be always on the alert to take his departure at the least suspicion of weariness on the part of his entertainer.

When you go to pay him a return visit there will be the usual running to and fro of messengers, and you will arrive at an opening in one of those mile-long, lofty fences of plaited reeds to which reference has already been made. Going through this doorway, which may be masked

by a reed screen, you will enter a large, clean empty courtyard opening into three or four other courtyards, in the last of which you may be greeted by a band of native music—flutes, horns, drums, etc. After passing through all these empty courts one arrives at the reception house. This is a building with an immense thick thatched roof descending in

93. A PRESENT OF FOOD, UGANDA

a bold slope and lifted up over the eaves of the doorway. Ascending a mud step or two, perhaps, we enter the dwelling, the roof of which is supported by a great many palm poles, and is therefore fairly lofty after the low doorway is passed. The floor is strewn with fine sweet grass. On this are placed closely woven mats or beautifully dressed skins, and there are numerous stools and chairs. No person of any consequence in

Uganda goes about without an attendant carrying a chair (and when chiefs come to visit you, you need not be in any way worried about providing seats for them to sit on, as each will bring his own). The interior of this house may be divided into compartments by screens or bark-cloth curtains. It is possible, however, that the dwelling in which you are received is a relatively simple one and is not inhabited at night. Other houses of a more elaborate character will be found in adjoining courtyards—the big man's own private dwelling and the house of his wife, and other huts for female members of the household or children, kitchens and latrines. On this last point the Muganda displays a sense of decency and cleanliness almost on the English level.

The forests and marshes of Uganda abound in remarkable monkeys and brilliantly coloured birds to a degree not common elsewhere in tropical Africa; but the Kingdom of Uganda, as may be imagined from its relatively dense population—a population once much thicker than to-day—has been to a great extent denuded of its big game. In the large District of Buddu, and in Koki, which form the southern districts of the kingdom, rhinoceroses, elands, and buffalo are still found in the bush country. In parts of Kiagwe also, on the east of the kingdom, there are buffalo, belonging to the Abyssinian, and not to the South African type. The bastard hartebeest (*Damaliscus*), known to Europeans as the "topi,"* and Thomas's kob (*Cobus thomasi*) are still found, though in decreasing numbers, in the more grass-covered country of the north-west and north, in which lands also Grant's zebra is met with in some numbers. Speke's tragelaph is still found in most of the big marshes and along the lake shores. Elephants are fairly abundant some distance from the more thickly populated centres, and it must be remembered that most of the population converges to the shores and islands of the Victoria Nyanza. The lion is a rapidly decreasing danger to the inhabitants, but the leopard is most abundant, even haunting the precincts of such a centre of European activity as Entebbe. There are two large wild-cats most common and characteristic of Uganda—the serval and the servaline. The servaline cat grows sometimes almost to the size of a leopard. Its skin, besides a few bold black markings, is covered with an infinitude of tiny black spots, so crowded together as to give it a dun colour at a distance. These skins are much in favour with the natives, as are also the blue-mouse-coloured pelts of the tiny *Cephalophus* antelope, the "entalaganya" of the Baganda, who sew these little blue-grey silky skins together and make beautiful mats of them. It is strange that the Baganda, who have a decided appreciation of beauty of form and outline, should apparently have no sense of colour to appeal to, though they live in a

* For native names of antelopes, etc., see Vocabularies (Chapter XX.).

94. A BAND OF MUSIC, UGANDA

land of blazing hues, a country where bird, butterfly, and flower—even earth-worms—unite to display under brilliant sunshine all the primary colours and many of their most exquisite blendings.

A characteristic tree of the Uganda Protectorate, and especially of Uganda itself, is the ekirikiti, so often referred to in the preceding chapters. This is a species of *Erythrina* which is deciduous, and ordinarily flowers when the leaves are absent from the tree. The grey-green branches are covered with flower-clusters which might have been cut out of crimson-scarlet velvet. Each flower in these clusters is like a large bean-flower, but the hood which covers the calyx is prolonged at its peak into a number of branching filaments almost of the same crimson-scarlet as the smooth petals. The general appearance of this flower having been sufficiently illustrated in this book (the cover is lined with it), there is no need to waste further space on its description. It is sufficient to state that these trees of bare grey branches hung with innumerable scarlet lamps are familiar objects all over Uganda, in the villages and in their precincts, and in the uncultivated bush. As the flowers turn into long curving seed-pods, the leaves spread out. The foliage is large, divided into three lobes, and of a bright yellow-green, so that both in leaf and flower the ekirikiti is the gayest object in the Uganda forests or as an ornamental tree or hedge in its gardens.*

In the interior of the Kingdom of Uganda,† besides the marshes and swamps alluded to, there are two pieces of water of considerable size. One is Lake Wamala in Southern Singo; the other is Lake Kachira in the country of Koki. This last-named lake, which was discovered by Captain Hobart, is of great beauty of scenery. In very dry seasons it may dwindle into three separate lakes connected by swampy rivers. Both Lake Kachira and Lake Wamala contain very large hippopotamuses, besides numbers of Speke's tragelaph.

Buddu is perhaps the most picturesque district of Uganda, owing to its varied scenery of hill and tropical forest. It is, however, unfortunately the most unhealthy portion of the kingdom for Europeans. Another district very beautiful in scenery is the little Muhammadan country of Butambala. There is also a good deal of fine hill scenery in Southern Kiagwe.

* Although the Baganda never seem to appreciate the feast of colour offered by the ekirikiti, they use this tree a good deal for making hedges round their compounds, partly for its quick growth, and partly because the branches are armed with formidable hooked thorns.

† This country should really be called "Buganda," which is its designation amongst the natives; but the land having first of all been discovered by explorers who only talked Swahili, and who were entirely dependent upon their Swahili interpreters for information, the mutilated form "Uganda" has now been irrevocably fixed as its European name.

Erythrina tomentosa: THE EKIRIKITI TREE.

95. IN BUDDU

The administrative capital of Uganda, where the headquarters of the Protectorate Administration are established at present, is also remarkable for its lovely scenery. This is situated at Entebbe, on the long indented peninsula of that name which stretches many arms out into the lake. "Entebbe" means in the Luganda language "a throne." There are lofty green downs on this peninsula which command a splendid view over the coasts and islands of the north-western part of the lake. It is round the foot of these downs, on their southern aspect, that the European settlement is built. The eastern side of Entebbe is tropical forest of exceptional magnificence, which has been cleverly transformed by Mr. Alexander Whyte into botanical gardens, some day to become notable for their beauty. One prominent feature in the landscape of Entebbe, and in fact of much of Southern Uganda, is the lofty incense-trees (*Pachylobus*). These grow to a great height, and are perennially covered with a rich green pinnate foliage. The rugose trunk of thick girth sweats a whitish gum, which, scraped off and burnt on hot coals, produces the smoke of fragrant incense. These trees produce at certain seasons of the year enormous quantities of blue-black plums, which are the favourite food of grey parrots, violet plantain-eaters, and the great blue *Corythæola*, besides monkeys and hornbills. Wherever, therefore, there is one of these trees growing, those who live in the neighbourhood may enjoy all day long the contemplation of the gorgeous plumage of these birds, the antics and cries of the parrots, and the wild gambols of the monkeys.

Another feature at Entebbe is the abundance and tameness of pythons, which sometimes measure as much as seventeen feet in length. The Baganda think nothing of laying hold of the wild python, who may perhaps have coiled himself up in some hole, and however much the snake hisses and protests, it seldom seems to bite. Yet these snakes could crush a man between their folds, and do crush and devour numbers of sheep and goats. They seem, however, very loath to attack mankind, and will allow extraordinary liberties to be taken with them. The vividly painted puff-adders of the Gaboon species are as common as the pythons, and although their bite is absolutely deadly, they, too, do not seem to be much feared by the natives.

The fig-tree, which produces the bark-cloth of Uganda, grows, of course, most abundantly in and around all these settlements, European and native. The figs of this and other allied trees are much sought after by the violet plantain-eaters. These lovely birds, whom the Baganda dislike but very seldom molest,* show little or no fear of man. They hop and crawl along the smooth trunks and branches of the fig-trees, spreading out their

* No appreciation is shown of their gorgeous colours. They are disliked because of the damage they do to the bananas.

VIOLET PLANTAIN-EATERS AT PLAY.

wings and straddling across the branch as if to exhibit their lovely colours, chasing one another with loud hoots and mocking cries. The coloured illustration should give some idea of the crimson pinions, violet-blue body, crimson crest, and yellow beak of these birds, which are such an everyday sight in and around Entebbe.

The most disagreeable feature, perhaps, of the whole of the Uganda Protectorate, and especially of the Kingdom of Uganda, is the frequent and very dangerous thunderstorms. Hitherto in these descriptions I have had difficulty in restraining language within the limits of reasoned enthusiasm when describing the scenery and colour. The reverse of this pleasing aspect of the Uganda Protectorate is the almost constant presence

96. A PATH IN THE BOTANICAL GARDENS, ENTEBBE

of mosquitoes (though these can be to a great extent banished by clearing away the bush), the danger of severe attacks of malarial fever, and, lastly, the thunderstorms. When you are travelling through the wilderness, the thunderstorm presents to you four possible ways of dying:—one: you may quite possibly be struck and killed by lightning, or if not killed, severely paralysed; two: the lightning may set fire to your house or tent; three: the appalling wind which precedes the crash of the storm will almost certainly level your tent with the ground, and may very probably bring down your temporary house in ruins—in either case you may be struck and killed by the ridge-pole of the tent or the beams of the roof of your house; four: you may escape death by lightning or by the downfall of your dwelling, but you are left without a roof over your head, exposed to the full force of the tropical rain, with perhaps nothing on but night

garments. The actual shock of being out for some minutes, or half an hour, in this douche of cold water may cause collapse, or produce pneumonia, which may be fatal in three days.

These considerations, in the absence of properly constructed houses or tents warranted to resist a hurricane, cause one to view with serious apprehension the approach of every storm, and at places like Entebbe there must be nearly 200 storms in the year. They generally come on at three o'clock in the afternoon or three o'clock in the morning. The day or the night has been extremely hot, and there has been an utter absence of movement in the air. Over the sea horizon of the lake purple clouds begin to form, which, as they rise and cover the heavens, turn to an awful monotonous dun-grey, becoming whitish over the storm centre, with one or two little patches of blackish cloud floating over this dirty-white focus. The whole sky is almost covered before the storm bursts. As a first warning (if it be daylight), the glassy surface of the lake near its horizon becomes ruled with black lines which are the advancing billows of the wind-lashed water. Then in the distance arises the sound of a rushing wind which comes nearer and nearer until trees a hundred yards distant are seen to be swaying and cracking, whilst there is still a deadly calm where you are standing. Then the blast strikes you, being preceded possibly by a cloud of blinding dust or a squall of leaves. Doors slam in the houses; unfastened windows are wrenched off their hinges, and the papers and light articles in the rooms are whirled hither and thither, while in the garden or forest hard by branches crack and loosely rooted trees fall to the earth with a frightening crash. If you are in a tent and watching this storm, in all probability the first impact of the wind has levelled your canvas to the ground, and all your treasured belongings on your camp-table and your bed are exposed to the rain which is now approaching. This is nothing less than a cubic mile of grey water which is being driven towards you at fifteen miles an hour. In this moving shower-bath you remain for thirty minutes or more; then if you have survived this, there may be a lull. Then another cubic mile of water will be driven up and over you.

At last the storm settles down into a fine, steady downpour, and the worst is over. But the lightning! If it be night-time when the storm comes up, you will see when the purple clouds first form over the lake horizon that they are lit up every minute or so by silent flashes, revealing with temporary vividness the shapes of the cumulus clouds. Then for a time the coruscations cease, until the heavens are one pall of dun-grey cloud. Almost simultaneously with the arrival of the hurricane wind comes the first flash of pink lightning, followed immediately by an explosion of thunder which seems to be the crack of doom. If your own

dwelling and porters escape (as of course they do in the great percentage of cases, or life in these regions would be impossible), you will almost certainly see a tree struck or somebody else's ridge-pole go down. Tall trees, however, are the most frequent victims, and really serve as lightning conductors, screening the human being by receiving the worst of the electric fluid. These terrible flaming swords of fire reveal to you the grey wall of water by which you are surrounded. Gradually they become less vehement, and are accompanied after much greater intervals of time by rumbles of thunder more bearable than the artillery crashes which first accompanied the forked lightning. It occurs sometimes, however, that when you think the storm is over and done with and are about to return to your bed, thankful to have escaped on this occasion with your life, a fresh storm comes up, or rather the old one returns in its circular course, and there is a renewal of your agonies of apprehension.

97. IN ANKOLE

CHAPTER IV

THE WESTERN PROVINCE AND THE NILE

THE Western Province contains the Districts of Ankole and Toro, the little territory of Mboga, to the north of the Semliki River, and the District of Unyoro, to which is also attached at present the west coast of Lake Albert Nyanza.

Ankole is for the most part a parallel (though on a lower level) to the Nandi Plateau in the same latitudes on the east of the Victoria Nyanza. It consists principally of a lofty but somewhat broken tableland 4,500 to 6,000 feet in altitude, rising in many places, however, to mountain ranges and masses of 8,000 feet or more in altitude. In fact, here and there the heights of Ankole assume in their vegetation that Alpine character met with on the other high mountains of the Protectorate above 8,000 feet in height. A portion of Western Ankole which borders the east coast of Lake Albert Edward is covered with dense tropical forest,

and this forest—very like that of the Congo in character—also extends into the northern hills of Ankole to altitudes of 6,000 and 7,000 feet. This tropical forest, like patches of a similar nature in Toro and Unyoro, is said to contain chimpanzees, and it is also related—though I have no

98. A CRATER LAKE

proof of the correctness of the statement—that people like the Congo Pygmies lurk in the dense forests of Western Ankole.

The northern part of this district is exactly like Uganda in its combination of grassy hills interspersed with marshes or sluggish rivers choked with vegetation. South-western Ankole is a mountainous country

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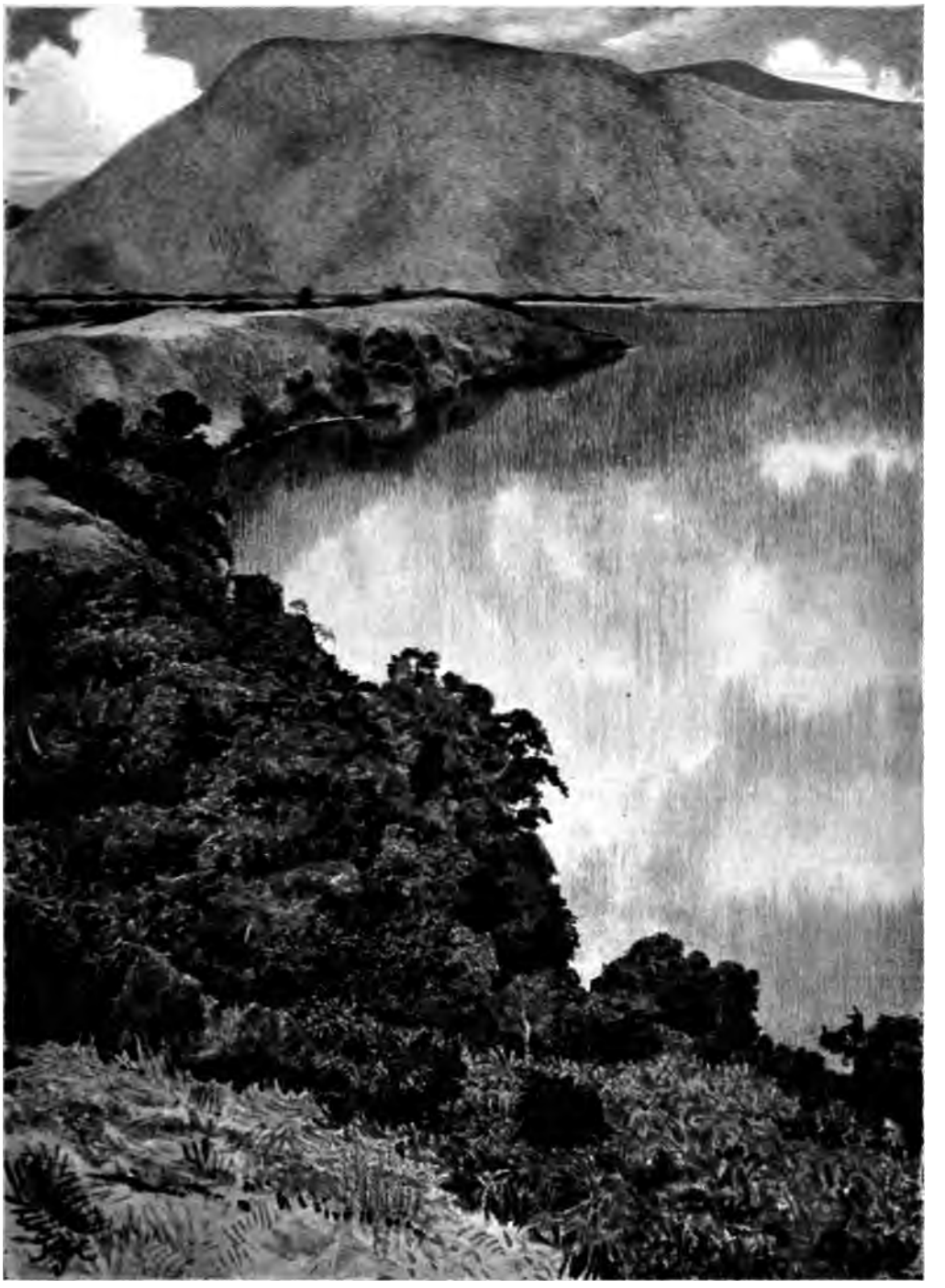
with a temperate climate, good pasture, and not many trees.* South-eastern Ankole is of rather low level, and approximates in character to average East Africa, with a marked dry season alternating with the wet, and a tendency to parched vegetation and absence of luxuriant forests. The scenery in the north-west of Ankole is of quite exceptional beauty, containing a number of large broken-down craters of extinct volcanoes

99. A CRATER LAKE

that are filled with fresh-water lakes ranging in size from one mile in area to a surface of over twenty square miles. The remains of the crater walls rise above these clear, still lakes into hills and mountains, and their reflections cover most of the lake surface. The vegetation along the

* In that corner of the Protectorate, in the country of Mpororo, which borders on the Mfumbiro volcanoes (three of which are active), the whole ground, according to Lieutenant Mundy, is covered with lava. It is very rough ground to travel over, as the lava is broken into large blocks and small fragments.



A Crater Lake: Ankole.

shores is fantastically rich in palms, forest trees, lianas, flowering creepers, and wild bananas, while the slopes that are not precipitous are covered with cultivated banana plantations and beset with pretty little huts. The waters of these lakes are alive with grebes and ducks, and the sheltered creeks are covered with the blue lotus.

As the climate on the altitudes that overlook these crater lakes is

100. A CORNER OF A CRATER LAKE

quite temperate (the surroundings are touchingly home-like with their bracken, their daisies, and their brambles), and as the greater part of this country is at present without native inhabitants, one may dare to hope that a smaller repetition of the great white colony of Nandi may be founded in North-West Ankole. Nowhere in the whole Protectorate is the scenery more continuously alluring, while the climate lacks that touch of damp and chilliness which occasionally dims the perfection of Nandi. Here, too, you have every mile or so a running stream of

clear water, such a pleasant contrast to the stagnant watercourses of Uganda.

Except for the banana plantations and the pretty little settlements of

101. LAKE ALBERT EDWARD, FROM KATWE (KATWE GULF)

natives round about the crater lakes, both of which smack of former Uganda immigration and influence, the real Ankole villages are rather untidy and unprepossessing. They are kraals of mean huts, with loose, straggling thatch surrounded by a hedge of thorns and an area of trampled mud and manure, kept clear of vegetation by the immense herds of cattle, sheep, and goats. Here and there the dwelling of a chief has its clay sides and door and settle decorated with black and white designs, but for the most part there is nothing picturesque or other than squalid about the habitations of a race which is perhaps in its aristocracy the handsomest that is native to the Uganda Protectorate.

The inhabitants of Ankole belong to two very different types. The mass of the population are rather well-developed black negroes, much like those of any other part of West or South Africa. But the aristocracy, the now celebrated Bahima, are, when of pure blood, quite different to their former serfs and subjects. They have the features of the Hamite or of the ancient Egyptian, and sometimes quite a reddish yellow skin. Like so many of the aristocracies and ruling races in Africa, they are passionately fond of cattle, despise agriculture, which they leave to the

subject race, and live mainly on the produce of their flocks and herds, though not to the same exclusive extent as the cattle-keeping Masai. They have a great indifference to clothing, and the drapery they wear is intended either for temporary adornment or to meet a cold wind.

Their cattle are noble adjuncts to the landscape of granite tablelands, rolling downs, and ornamental trees. Larger than almost any other breed of cattle in existence, with straight backs and long dewlaps and enormous spreading horns, they make the commonplace rubbish-heaps of the village interesting and picturesque, and give their pasture grounds of short grass interspersed with clumps of bracken, brambles, and English-looking flowers the appearance of some precious bit of wild English park, in which a rich man keeps feral cattle for their beauty and not for beef. About Ankole and Eastern Toro there flits a black and white chat which is a near relation of the one which is so prominent a feature in the landscapes of the Eastern

102. LAKE ALBERT EDWARD, KATWE GULF (*NOTE* THE CANDELABRA EUPHORBIAS)

Province, with this difference—that the white spot is on the shoulder and not on the pinions of the wing.

Lake Albert Edward, which forms the western boundary of Ankole, has

a few small islands just within the British sphere near the south-east corner, and other islets close to the Bay of Katwe on the north-east. The water of this lake, except perhaps in the very middle or near the south end, is brackish, or at any rate unpalatable to man. Dense forest comes to within a short distance of the east coast, but is separated from actual contact with the water by a marshy belt that swarms with water-birds. Although the rainfall on and around Lake Albert Edward must be considerable, the ground on the north side of the lake exhibits a vegetation of somewhat starved

103. THE SALT LAKE AT KATWE

appearance, except where the shore is actually swampy. The principal object in the grassy landscape (though about the salt lakes of the north there is even an absence of grass, and the country looks blasted) is the tree euphorbia which I described in connection with the Eastern Province. The lake, of course, abounds in fish and in birds, the latter not seeming to mind the brackish water at all.

On some parts of its eastern and northern shores may be seen magnificent displays of water-fowl. They may be observed, and even sketched, through a field-glass. There are rows of Tantalus storks, with lemon-yellow beaks, white heads and breasts, black-green wings, and shoulder feathers of exquisite

rose-pink; squadrons of pelicans, cohorts of crowned cranes (wading, dancing, and feeding on the shore-line), flocks of russet-white and metallic-green Egyptian geese, blue-grey herons, fawn-coloured herons, white egrets, black cormorants, black-green and white saddle-billed storks with crimson beaks, purple and white ibises, and huge marabou storks, with the mottled beaks and faces of drunkards, the scraggy necks and white plumes of dowagers, and huge wings of satin-like grey-green. At certain hours of the day this immense concourse of birds will meet (no doubt attracted by shoals of fish) to feed, fight, court, play, and display. In two hours perhaps all may have

104. THE KAFURU STRAIT BETWEEN LAKES ALBERT EDWARD AND DWERU

vanished, either to proceed to another feeding place or to settle down for the night at their roosting or sleeping resort. Their cheerful clamour would be heightened by the bold screams of the great fish-eagles. These vociferating birds when adult have boldly coloured plumage of white, chocolate-brown, and black.

To the north-east, Lake Albert Edward sends off or receives a curious extension, which, on the whole, had better be called Lake Dweru. During the rainy season the waters of Lake Dweru flow through a channel like a broad winding river into Lake Albert Edward. During the dry season of Ruwenzori, it is possible that the waters of Lake Albert Edward, receiving the rain supplies from south of the equator, flow northwards into Lake

Dweru. The whole of this curious extension of Lake Albert Edward lies within British territory. A steamer, therefore, placed on Lake Albert Edward

105. "THE MPANGA LOOKS VERY LIKE A MOUNTAIN STREAM IN SCOTLAND"

would be able to visit a great deal of valuable territory all round about Ruwenzori.

To the north-east of Lake Albert Edward also lie certain small crater lakes, nearly at the same level, but separated from Albert Edward or the Dweru by strips of rocky land varying in width from a few hundred yards to a few miles. These lakes are probably extensions of Lake Albert Edward filling up old volcanic craters. They have become very saline. In some cases the water has almost entirely disappeared, leaving a smooth floor of salt mud. In the case of little Lake Katwe, which is close to the Congo

Free State boundary, the water is intensely salt, and furnishes when evaporated a salt of considerable commercial value. The photograph which is given here represents a corner of this lake, showing the abrupt edge of the crater and the banks of mud which the natives have made to

106. *PANDANUS* ON THE DURRA RIVER

enclose, for evaporation purposes, the shallow water near the shore. This salt lake of Katwe is certainly a very remarkable sight, seen from the heights

above. The water is of glassy stillness, and reflects the surrounding coasts like a mirror, but like a pink mirror. The water, in fact, has an almost carmine tinge, and the objects reflected in it are, in their shadows, blood-red.

It is difficult to understand how previous travellers could have failed to notice that the narrow strait of water, generally called by the natives

107. IN THE MPANGA FOREST, TORO

"Kafuru," connecting Lake Dweru with Albert Edward was not—as has been depicted hitherto on most maps—a broad lake-like piece of water, but, on the contrary, a narrow and winding channel between rather high, sloping banks or cliffs, which would always confine the water within its present limits. Moreover, the lake, which lies in Southern Toro, and is connected with Albert Edward by this river-like channel,* is not and

* This lake is the original Beatrice Gulf, discovered by Stanley in 1875.

never was called "Ruisamba," which name, if it exists at all, is the designation of a forgotten village on its banks. The natives call this sheet of water "Dweru," which simply means "the white," and is a term applied to Lake Albert Edward and Lake Albert Nyanza by the Bantu-speaking folk who dwell in the vicinity. "-Eru" is a very old and wide-

108. IN THE MPANGA FOREST, TORO

spread Bantu root for "white," and is constantly applied to large sheets of water, which of course, seen from a distance, do look white in the natives' eyes, as no Negro tribe untouched by European or Arab influence has any word for blue, but considers light blue to be white and dark blue to be black. This root "-eru" reappears in Lake Mweru, far to the south, beyond Tanganyika. Mweru is a very common name given to all the great

lakes of South Central Africa in turn by the Bantu tribes lining their shores.

The District of Toro, which, from an administrative point of view, also includes the British territory of Mboga, to the north of the Semliki River, is not a very clearly defined or homogeneous country from the native point of view. It really consists of a bundle of little principalities, which at the commencement of the British Protectorate were confederated and made to recognise as supreme chief the king of Toro proper, this being a small country on the east of the Ruwenzori range. The sub-district of Kitakwenda (formerly an independent principality), in the south of the Toro District, is a very rich piece of country from an agricultural point of view, but contains a good many tedious swamps, which are not at present traversed in all directions by causeways, as in Uganda.

North of Kitakwenda one comes to the River Mpanga, rather a notable stream, which rises on the north-eastern flanks of Ruwenzori, and after a great bend eastwards flows into Lake Dweru. For the first half of its course the Mpanga flows through a dense belt of tropical forest, which extends south-west from near the frontier of Uganda (not far from the Albert Nyanza) to the north end of Lake Dweru. In the second part of its course the Mpanga looks very like a mountain stream in Scotland, tearing down through a boldly designed country of grassy mountains and hills with outcrops of granite, and with only a few trees in the sheltered hollows. All this bit of scenery is very picturesque. Along the course of the Mpanga are handsome acacias growing among the boulders, and numbers of cycads. This is the only place where, in the course of all my travels through the Uganda Protectorate, I have seen a cycad (*Encephalartos*) growing. These distant allies of the *Coniferæ* are relics of a bygone order of vegetation which flourished during the Carboniferous Epoch. They have fronds like huge, coarse, leathery ferns, and also very like the fronds of certain palms. These leaves arise from the head of the stem, which may be a short trunk or a long, prone, woody growth, recumbent on the ground. In the middle of the fronds there push up one or more enormous cones (like gigantic pineapples in shape), outwardly of a greyish green, with hexagonal seeds offering internally a vivid orange pulp.

The belt of tropical forest stretching north from Lake Dweru towards Unyoro (running parallel with the Ruwenzori range, though twenty miles distant from its foot-hills) is remarkable for its tropical luxuriance. It lies at an altitude 1,000 feet below that of the Uganda forests, as all this valley of the Dweru and its feeding rivers forms a loop of the Albertine depression, which almost encircles the Ruwenzori range. The streams that circulate through this Mpanga forest are probably fed all the year round by the melting snows of Ruwenzori. They always seem to be full

109. THE *BORASSUS* PALM, SOUTH TORO

and the vegetation on their banks might be that of the west coast of Africa, for it includes the *Pandanus*, or screw pine, so characteristic of West African mangrove swamps. These forests of the Durra, of Kibale, and of the Upper Mpanga contain large numbers of chimpanzees, and it is from these that were obtained the specimens of the Uganda chimpanzee which we sent to the British Museum. There are also colobus monkeys of the common species, and another colobus, which I took to be new to science, but which apparently has been found by Dr.

110. IN EASTERN TORO

Peters on the Tana River in East Africa. This monkey has long fur of reddish grey, with a bright red crown to its head.

These Mpanga-Durra forests swarm with butterflies of particularly gorgeous colours, brilliant even for the tropics. One butterfly, about the size of the English cabbage-white, is simply pure scarlet all over the upper surface of the wings. Others are bright ultramarine blue, or pale blue with fluffy white tails. Others, again, have a divine purple sheen which in certain lights turns all their markings of black and brown and fawn colour to an unbroken violet. There are the usual gorgeous swallow-tails of black, white, and yellow with ocelli of crimson or dark blue, or of velvet-black embroidered with shining gold, or scalloped with azure-

blue or grass-green. A common species and a large insect has the upper part of its wings like mother-of-pearl—gleaming and opalescent. But perhaps the ones that made the most vivid impression on my retina were those of pure vermilion. These butterflies would hold up the whole of the caravan, for they would settle in masses and clusters on the moist soil of the path, sucking up water from the mud; or the largest and handsomest covered some putrefying bits of carrion or the fæces of a

III. ON A TORO RIVER

leopard with a hundred wings of shimmering colour. Then of course the long line of porters had to wait whilst butterfly nets descended and the glorious captures were pinched to death with trembling fingers and put securely away in collecting boxes. Fortunately the masses of butterflies were so great that these often futile raids on their numbers to secure specimens for identification made no impression on the flitting thousands, which really seemed like flowers let loose. So like were many of them to the white balsams, scarlet *Mussœndas*, and the blue and purple flowers

112. A MOUNTAIN STREAM (THE RUIMI)

of many kinds, that I have swooped with my net at an unoffending shrub to secure nothing but a battered flower. or I have passed without molesting a bush from which at my approach all the white and yellow blossoms flew away.

A good deal of Southern Toro is uninhabited, or at least has but very few inhabitants, and there is therefore an absence of banana groves and of cultivated fields, so that the country has a wild aspect. This also means that there is a good deal of game—elephants, various antelopes, possibly a few buffalo lingering still, and lions. In this part of the district, where one has descended to the Albertine depression and the altitude is not much over 3,000 feet, the *Borassus*, or fan palm, appears. Elsewhere this handsome tree is absent from the Uganda Protectorate, except in Unyoro and in some of the countries bordering the Nile. This may partly be accounted for by the high altitude that characterises such a large proportion of this territory. After the abundance of *Borassus* palms in Nyasaland, East Africa, and the less forested regions of the Congo, the Niger, and the interior of the west coast, its absence in Uganda strikes the European who has seen other parts of Africa as unusual.

Eastern and Central Toro are perfectly delightful countries, especially in the sub-district of Mwengi. The road winds round enormous grass-covered hills of beautiful outline and bracing climate. The scenery is exactly like that of the Cheviots, with the difference, of course, that the actual trees belong to tropical species, and that the flowers only offer superficial resemblances. The grass is not really short, but its surface is

A Landscape in Western Uganda; shewing flowers of *Emilia*.

so smooth that the hills at a distance look as though they were covered with close yellow-green turf. Nearer to the frontier of Uganda the country is more wooded, but is equally beautiful, large areas of the down-land in and out of the pretty copses and graceful shade-trees being overgrown with a species of *Emilia*,* which produces innumerable small blossoms like those of the groundsel in shape, of mauve with a stalk of red. Some of these hillsides are alternately mauve and green (when grass predominates), with bright notes of sulphur-yellow where a handsome yellow thistle rears its head among the mauve *Emilias*. Eastern Toro is very like Uganda in its character of alternate hill and swamp. You come to no running water until you reach the River Mpanga, within a day's march of Ruwenzori.

Unyoro is a country now of considerably restricted area. Geographically, and bounded in accordance with race and language, Unyoro really extends over the northern Districts of Uganda and Toro, but since the conclusion of the wars waged with the ex-king of Unyoro, the southern parts of that kingdom have been handed over to Uganda and Toro. The eastern part of Unyoro is swampy in the stream valleys, and a little inclined to be harsh and sterile away from the watercourses. There is, however, fine scenery along the Victoria Nile from its confluence with the Kafu to its descent into Lake Albert Nyanza. Especially notable are the Karuma Falls, where the river is compressed into an extraordinarily narrow space. Down the centre of Unyoro, running from north-east to south-west almost parallel

113. ON THE BANKS OF THE RUIMI, CENTRAL TORO

* Probably *E. integrifolia*.

with the coast of Lake Albert, there are bold heights, rising perhaps here and there to altitudes of 6,000 feet, though the average elevation of Unyoro is quite 1,000 feet below that of Uganda. Some of these

114. COUNTRY WITH *BORASSUS* PALMS AT THE SOUTH END OF LAKE ALBERT

hills or mountains are of striking aspect, great wedges of table-land left standing and isolated. Occasionally, however, these worn-down fragments are in shape and outline like those rounded posts which were formerly used to bar the way to vehicles on roads or passages intended for pedestrians only. Their sides are almost perpendicular, but the top is rounded. There are also, as in Northern Toro and Western Uganda, piles of huge boulders and weather-worn crags of naked rock which look like a Stonehenge in ruins, or the fragments of a building raised by Cyclopean masons.

In this open country of rocks and grass which is so characteristic of Central Unyoro, Western Uganda, and Eastern Toro, there are many birds of prey which find these crags and peaks and inaccessible monoliths convenient eyries for nesting, while the open country enables them to mark down and seize their prey—anything from a rat to a small antelope. A common and beautiful object in countries like this is the bateleur eagle, which is rather a peculiar development of the fish-eagle group, with the most vivid coloration, perhaps, to be found in any bird of prey. The bateleur eagle is styled "tailless" in its specific name because the feathers of the tail are extremely reduced in size, and are completely concealed in the folded wings when the bird is at rest, while they are merged in outline with the great secondary quills of the outspread wings when the bird is soaring. Watching one of these eagles one day sailing in circles above

Bateleur Eagle striking a young Jackal.

our heads, we saw it suddenly drop to the ground. Running up to see what it had struck, we found the bird in the characteristic attitude depicted in the accompanying illustration. It had struck a young jackal, and was gathering its pinions around it in a semi-circle, partly to screen its body from counter-attack, partly, no doubt, to prevent some other eagle snatching at the prey.

All along the western aspect of this mountainous ridge that runs through Unyoro there is more or less dense tropical forest, which, together with the not far distant Mpanga Forest of Toro (and this again stretches with few breaks to the south-eastern coasts of Lake Albert Edward), constitutes a kind of outlying belt of the great Congo Forest that lies on the other side of the Albertine Rift Valley. These Budonga and Bugoma forests in Western Unyoro are inhabited by chimpanzees. They are extremely rich in all the rubber-producing trees and vines which are native to the Uganda Protectorate, and swarm with elephants bearing exceptionally large tusks.

115. "WHITE-EARED COBUS ANTELOPES" ON THE NILE

The Rift Valley of Lake Albert recommences in Southern Toro, curls round the south of Ruwenzori, includes Lake Albert Edward, and then passes between the edge of the Bulega, or Lega, Plateau and the highlands

bordering the east shore of Lake Albert. It contains, as I have already said, forest at the head of Lake Dweru; then a much drier region round the south end of Ruwenzori (where the rivers flowing from the mountain to the lake have carved for themselves deep, broad, Colorado-like gorges in the sloping tableland); a valley offering park-like scenery of grass and trees on either side of the Upper Semliki; and finally it is swept over by a great tropical forest that overflows from the Congo watershed across the Semliki almost to the north-western slopes of Ruwenzori. North of this forest a harsher country of salt marsh and grass steppe supervenes, the marshes thicken, join together, and constitute the south end of Lake Albert.

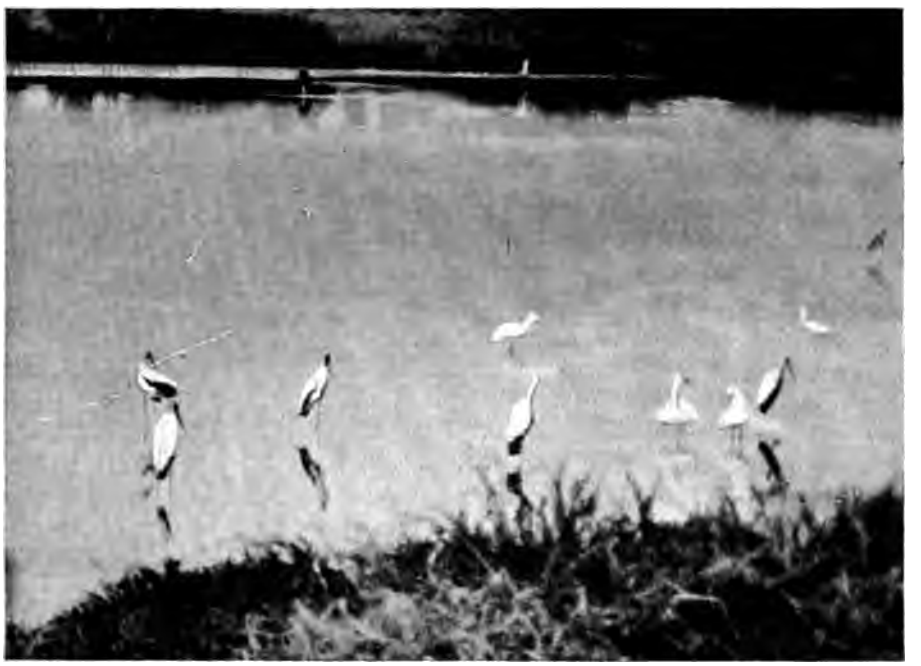
The eastern and western shores of this lake are narrow strips of land immediately overhung by the frowning cliffs of the Unyoro and Bulega Plateaux. The ground here is so constantly impregnated with salt that very little vegetation grows beyond euphorbias. The water of the lake anywhere near the west, east, or south shores is scarcely fit to drink, owing to the salt it contains, but the Albert Nyanza is full of fish, and swarms with water-birds and crocodiles. At the north end of the lake, where the Victoria Nile enters and the Albert Nile leaves, there are many sandbanks, floating islands of vegetation, and sudd obstructions; and the dangers to

116. MARABOU STORKS ON THE NILE

navigation are added to by the numerous and hostile hippopotamuses. North of Lake Albert the country is mainly a grassy plain, with few inhabitants away from the river banks, and vast herds of big game. Thenceforth down the Nile, except in the rocky gorges of the rapids between

Dufile and Fort Berkeley, there are few trees to be seen anywhere near the river, though there is rich forest in the valleys of the tributary streams.

The Nile is broad as far north as Dufile, with lake-like windings in parts,



117. ON THE NILE BELOW GONDOKORO

of uncertain channel, containing many sandbanks and islands, and floating masses of grass which look like permanent islands. From Dufile north-west to Fort Berkeley the river narrows and falls nearly 1,000 feet in continual rapids and rushes. The scenery of the gorges between the confluence of the considerable River Asua and the Labore Rapids is said by Mr. Lionel Dècle to be one of the finest bits of natural beauty in the Protectorate. From Fort Berkeley north-west the banks of the river become increasingly marshy until the eye wearies of papyrus and horizons of white-plumed reeds. On the banks of the river almost the only form of tree is that fresh-water mangrove, the ambatch (*Herminiera elaphroxylon*), which has been already described in connection with the Victoria Nyanza. All along this section of the Nile the hippopotamuses are a danger and a nuisance. White-eared cobus antelopes with bold markings of brown and white frequent the reed brakes. Enormous crocodiles lie on the muddy banks

amongst a congeries of waterfowl, which are the only objects to please the traveller's eye. Prominent amongst these are the saddle-billed storks, the white egrets, the sacred ibises, the pelicans, the marabou storks, and last, but not least, that remarkable *Balæniceps rex*, whose beak causes him to receive from the Sudanese Arabs the name of "Father of a Ship" ("Abu Merkab").

At some distance from the swampy banks of the Nile—which near Gondokoro seems to form during the rainy season vast stagnant backwaters—the ground rises from that level of between 1,000 and 2,000 feet which characterises the trough of the Nile Valley from the south end of Lake Albert to Gondokoro, and stony hills grow into granite mountains until in the Latuka country elevations of nearly 10,000 feet are reached. Though the upper part of the Nile Valley is swampy, at some distance from the banks of the river or its tributaries there is considerable drought and sterility of soil. The rainfall is uncertain, and the ground not very retentive of moisture. But in the mountainous land of Latuka, and in the less mountainous but still lofty Acholi district, there is a more regular rainfall precipitated on these heights, and the soil lends itself to a great deal of cultivation. The people keep large flocks and herds, for which there is excellent grazing. Nevertheless, with the exception of a few sites in Latuka, none of these lands seem to have the pleasing aspect in general which is so characteristic of the countries round the Victoria Nyanza. There is a great deal of coarse grass and thorny scrub, and not much real forest. The hills are often masses of rock with little vegetation growing on them, and the rivers degenerate into swamps during the rainy season which support no useful vegetation. The natives, except in Latuka (where there is a great deal of Muhammadan influence, which has brought Arab costumes), are remarkably nude, as they are throughout the whole of the Nile region from the northern frontier of Unyoro to within 200 miles of Khartum.

There is a Nile Negro type represented by the Dinka, Bari, and Acholi, extending from the western frontiers of Abyssinia to the Bahr-al-Ghazal, and down through the Central Province almost to the shore of the Victoria Nyanza, which, independently of any language connections, has a certain similarity of bodily appearance. Both sexes tend to considerable stature. They are lean and spare in body, with heads relatively small, necks long, and legs with powerful thighs, but singularly lean and lank between the knee and the heel. The shins are much bowed, and there is hardly any calf to the leg. The German traveller, Heuglin, wrote about them in the 'sixties thus: "These people give one the impression that amongst men they hold very much the

Balæniceps rex.

(The Whaleheaded Stork.)

same place which storks or flamingoes occupy with regard to other birds. Their leisurely long stride over the rushes is only to be compared to that of the stork. Like marsh-birds, they are accustomed for an hour at a time to stand motionless on one leg, supporting the other above the knee." It is curious that the last characteristic extends from the Nyam-Nyam on the north-west right across the Nile to the Masai and Kavirondo of the south-east, even though these tribes may inhabit a mountainous and not a marshy country. The traveller passing through the Acholi, Bari, and Latuka countries of the Nile Province will constantly see

118. SADDLE-BILLED STORKS ON THE NILE

natives standing on one leg on the top of an ant-hill with the foot of the other leg pressed firmly against the lower part of the standing leg's thigh, while the man obtains further stability by resting one hand on a long stick.

The villages in these Nile countries are generally little collections of huts, with a cattle kraal and places for sheep and goats, the whole surrounded and protected from wild beasts by a hedge made of the branches of the thorny acacia. The flounced thatching of these Nilotic villages is particularly characteristic of the Sudan, and extends from the west coast of Lake Albert to the vicinity of Khartum, and perhaps thence westwards into Kordofan and the countries near Lake Chad. It is best

illustrated by the illustration given in Chapter XVIII., which is taken from a photograph by Mr. E. N. Buxton.

Many of the Lango or Latuka natives wear the extraordinary head-dresses of the Sūk and Turkana, a bag of plastered, felted hair which hangs down the back.

These Nile lands are usually the haunts of big game. Thousands of cobus antelopes of four different species, the bastard hartebeest, or tiang, the hartebeest, or tetal, Baker's antelope (that northern form of hippotragus which is scarcely distinguishable from the roan antelope), the eland, the kudu, the bushbuck, and reedbuck are found in large numbers. There is also the great square-lipped rhinoceros—the so-called "white rhinoceros," which was at one time thought to be restricted to the countries south of the Zambezi. There are large numbers of elephants, and the northern form of giraffe. The buffalo apparently belongs to the Central African variety, which differs from the Cape form by a lesser development of the frontal boss, and horns that are longer and slightly more similar in shape to those of the Indian buffalo. Lions, leopards, cheetahs, hunting-dogs, spotted hyænas, and jackals make up the list of the principal beasts of prey.

The general aspect of this country east of the Nile and west of Turkana, in flora as in fauna, is very East African, resembling very much German East Africa and Northern Nyasaland, differing thus from the regions of the Rudolf Valley and Southern Abyssinia, which, together with Galaland and Somaliland, make, as regards their flora and fauna, rather a separate province by themselves; while, on the other hand, there are few or none of the west coast affinities which stretch right across the more southern parts of the Uganda Protectorate to the verge of Mount Elgon.

These countries of the Nile are terribly ravaged by locusts from time to time, which appear to come from the desert regions to the north. It is the red locust of Northern Africa (*Pachytylus migratorioides*). These locust invasions stretch right up the Nile, past Lake Albert, into Toro and Ankole, and across Uganda to the vicinity of Elgon. In the rich vegetation of Uganda south of the Acholi country the locusts cannot completely ruin the crops and bring about famines, as they do in the more arid countries east of the Nile. Nevertheless, it is a grim and repulsive spectacle to find oneself in the middle of a locust swarm. You may not be thinking anything of the kind, and be riding through a charming country, the trees in rich foliage, and perhaps lit up with bright flowers, the birds singing and the sun shining. Far away in the distance on the horizon are low, ragged clouds of a copper colour, which the heedless traveller takes to be either strangely coloured cloudlets or the smoke of

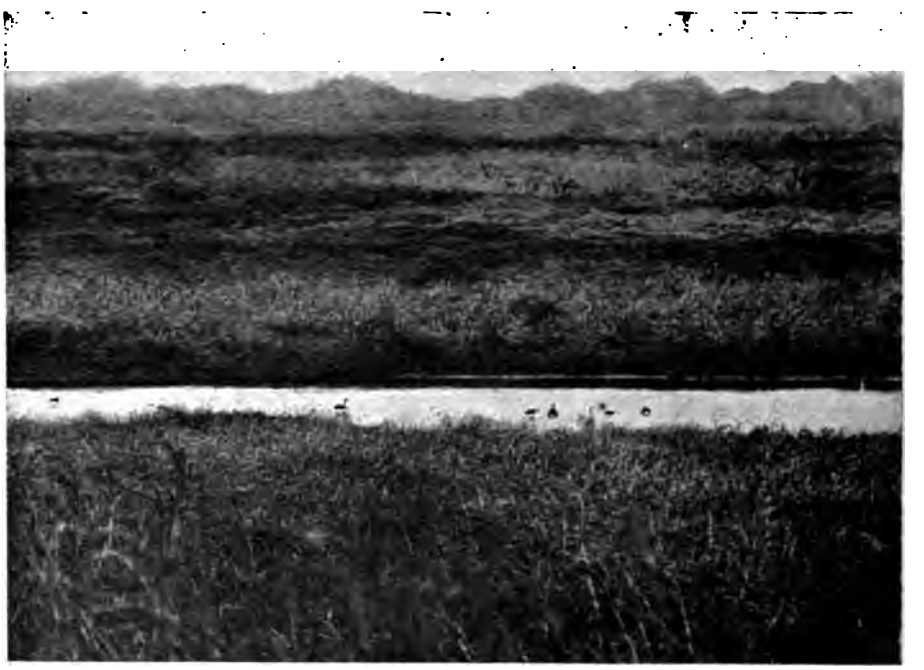
bush fires. Gradually, however, these clouds grow and spread out into the sky until they are seen to be composed of millions of locusts. The obscurity of a yellow London fog begins to tinge the landscape, sucking up all its brightness. Looking into the sky, the eye sees nothing but myriads of locusts diminishing in perspective from a hideous object three inches long just above one's nose to copper-coloured pin-points, and then to a copper-coloured haze. It is sickening to have to ride through these

119. BASTARD HARTEBEEST ON NILE BANKS

whizzing millions. They settle on your hair, on your hands, on your back, and I personally feel an inclination to vomit as I look at their monstrous horse-heads with the oblong, unintelligent eyes, and when I feel in contact with my skin the scratchy hooks and spurs of the long limbs. A disagreeable smell also accompanies these jostled millions of gluttonous insects. After a while the copper atmosphere may thin until at last the blue sky and sunshine appear again. The flight of locusts will now have settled on all the trees and herbage in the vicinity. It would seem as though some god had peppered all this beautiful vegetation with a sad reddish grey substance. So closely do the locusts on bare branches resemble dry seed pods or withered leaf shoots that you often take them to be such until, at your approach, hundreds of them swoop from the tree and bang into your face, leaving the poor stripped branches bare of any leaf or flower.

These Nile countries are further ravaged annually during the protracted dry season by bush fires. These may be started fifty times in a century by lightning setting fire to the stump of a tree, and spreading

the ignition thus to the grass; but by far the most normal cause is the hand of man. The native feels almost as strongly as we do the curse of the long grass which, during the rainy season, makes travel so difficult and conceals so much of the ground. As soon as the grass is withered by the commencement of the drought it is set fire to, and these grass fires, sweeping over wide plains, burn up all the vegetation they encounter. They thus make it impossible for large trees to subsist in unsheltered places. Scrubby trachylobiums, bauhinias, proteas, and such-like gnarled



120. SUDD ON THE NILE

and twisted trees can apparently stand an annual singeing without dying; but any tree of handsome appearance must of course be killed the first year and burnt the second. The bush fire drives before it big and small game, the elephant and the rat, often into the pitfalls of the natives; but once removed from the scare of the flames, the game will soon return eagerly to the burnt districts, knowing that in a few weeks' time tender green grass will show itself above the blackened ground.

The Nileland of to-day which is included within the Uganda Protectorate is much of it in sad contrast with its condition during Sir Samuel Baker's government of the Sudan, and even during the silver age of

Emin. First came the invasion of the Dervishes, following on the Mahdi's revolt, and these Dervishes carried fire and sword up the Nile, though they could not venture far from its banks. Then came that awful outbreak of rinderpest of some fifteen years ago. This destroyed the cattle of the Bari, and, deprived of their cattle, they, not being agriculturists, sickened and died in numbers. The Dervishes destroyed Emin's stations,

121. FLOATING ISLANDS AND WATER-LILIES ON THE NILE

and did not continue the cultivation he had begun. The land, therefore, near the Nile is now very desolate, though rapidly recovering under the influence of constant steamer communication with Khartum and the trading intercourse with Egypt which has followed on the cutting of the sudd.

The sudd (which should really be spelt "sadd"*—Schweinfurth first

* It is an Arabic word pronounced like the "sud" in "soapsuds"; but this is really a short sound of the vowel "a" in phonetic spelling.

refers to it as "satt" or "sett") is, as most untravelled people now know, an extraordinary floating vegetable obstruction which collects in the waters of these equatorial lakes and rivers where the lake surface is sheltered from rough winds, and where the current of the river is sluggish. Papyrus clumps become detached by the action of wind or floods, and, driven by the breeze into little groups, their roots become united below the surface of the water by the accretion of water-weed and other vegetable substances, so that in time a peaty mass is formed just below the surface of the water, from which the papyrus continues to grow as from a soil. A long *Phragmites* reed, with fluffy white plumes like pampas grass, grows out into the shallow water, and builds barriers into the stream which arrest the floating islands of papyrus; or this reed may form floating islands of its own. Papyrus may prosper so much on the floating islands, composed mainly of its own roots, that these roots may reach the thickness of a man's leg, and grow downwards twenty feet below the top of the floating islands.

The amaranth, or "love-lies-a-bleeding"; *Pistia stratiotes* (like a huge duckweed); a certain convolvulus creeper; and other vegetable items which drift down-stream all add their mass to the vegetable dam, or by rapid growth bind one floating island to another. In some cases the ambatch-trees (a kind of bean, with orange blossoms) grow steadily out into the water until the river becomes too deep. They make a stout wooden barrier which is one of the hardest parts of the sudd to cut through, a water-thicket with strong roots going down into the mud bottom. The water of the flooded Nile after the great summer rains rises, carrying this floating vegetation with it. These dams of a mile and more broad across its surface do not afford much resistance to the mass of the current, which flows steadily beneath them. Occasionally, however, an extra high Nile, combined with strong southerly winds, may for a time tear away the sudd, especially near the solid bank. On many of the northern creeks of the Victoria Nyanza, protected from the waves of the open lake, this sudd or vegetable growth is gradually creating a soil, and filling up the bays with what some day may be a land surface of peat, perhaps afterwards coal.

It is difficult to guess what might have been the outcome of the sudd growth on the Nile but for the action of European man. The work of cutting through this obstruction, which was conducted by Major Malcolm Peake, R.A., C.M.G., was one of the most creditable actions which white civilisation has produced in Africa. The results which should follow on free navigation between Khartum (now connected with the Mediterranean by railway and steamers) and the northern frontiers of Uganda will be of the greatest benefit to the starved and miserable natives of the Nile bank and the isolated and sickly Europeans who upheld the Uganda

Administration. Supposing these steps had not been taken, however, and the sudd had been allowed to accumulate unchecked? Would this in time have diverted the main channel of the Nile by the creation of a dam? The Mountain Nile could not have wandered far to the east or west of its present course. Perhaps after a century of sudd, which might have created a marshy lake in the Nile Province of Uganda, the pent-up water would have broken the dam and flooded the low-lying region between Fashoda and the Bahr-al-Ghazal, which was evidently once a huge northern prototype of the Victoria Nyanza, where the Nile waters were for some time stored before they carved a way through the Nubian Desert.

122. THE AMBATCH-TREE

CHAPTER V

RUWENZORI AND ITS SNOWS

IT may easily be imagined that the Special Commissioner from the moment of his appointment to Uganda had his mental vision concentrated on Ruwenzori, that little-known range of snow-mountains in the extreme west of the Protectorate. Political business, however, of many kinds, and of more importance to the objects of the mission than geographical exploration, detained him in countries east of Ruwenzori till the late spring of 1900. In March and April of that year he had been seriously ill at Entebbe with blackwater fever, and the medical officer attending him was of opinion that out of regard for life and health he should leave the tropical climate of Uganda for a while and see what effect a trip to the snows would have on an anæmic body.

Vigour returned, however, soon after quitting the coast-lands of the Victoria Nyanza. As we rode through Toro we looked out eagerly for that faint phantasmagoria of pinkish snow and mauve rock which was to appear in the heavens after every sunrise. But the great mountain was in a sulky mood, and it was not until we were only thirty miles from its base that for one precious five minutes we saw the alternation of snow and rock limned like the glimpse of another world in the western sky.

Ruwenzori is still the most mysterious and least-known mountain of Africa. Its existence as a snowy range, or a single snow-peak, was reported by Stanley on native information as far back as 1875, though, curiously enough, at that time he does not seem to have attached sufficient importance to the natives' stories of snow, which he repeats without comment. Yet he himself stood, in 1875, close to the eastern flank of this mighty mountain mass, and spent days if not weeks within sight of it. The whole time, however, the upper regions of the mountain remained completely veiled in clouds, and Stanley vaguely estimated an altitude of 15,000 feet as the possible climax of this imperfectly outlined mass of blue mountains. All the time Sir Samuel Baker, Gessi Pasha, and other explorers or officials of the Egyptian Sudan were navigating Albert Nyanza, the snow summits of Ruwenzori remained obstinately concealed behind banks of clouds. Sir Samuel Baker was struck with the apparent size of the great mountain

the "Lu-" or "Ru-" prefix, would be Runsoro, and it is obvious that Stanley unconsciously extended the pronunciation into Ruwenzori. In the Nyoro (Urunyoro) language the snowy part of the range is called Enchurru, which is probably a variant of the same root as the Lukonjo Nsoro. It is only on the authority of Stuhlmann, one of the few really careful observers and writers who have visited this region, that I give this explanation of the name Ruwenzori. I have made a careful study myself of the Lukonjo language,* and the nearest I can get is Ansorøro, which with the plural prefix "esi" (esiansororo) means "snow" or "snows." As a matter of fact,

124. A BIT OF RUWENZORI, FROM THE SEMLIKI VALLEY ON THE WEST

Ruwenzori is more often called by the Bakonjo who inhabit its southern half Obweruka, and by the Banyoro, who are the native rulers of the country, Ebirika. By the Baamba who dwell on the north-western flanks, and whose very name means "People of the Heights," it is called Gusia. By the people speaking corrupt Bantu dialects on the north-eastern edge of the Congo Forest it is styled Tüdii. The Baganda call this mountain range Gambaragara. The people dwelling to the south of Albert Edward Nyanza, who speak variants of the widespread Nyoro speech, appear to call the mountain Gularo. Amidst all this diversity of names, it is perhaps best to retain Stanley's somewhat incorrect version of Ruwenzori, though if only

* Because it comes almost closer than any other tongue (except Lukonde) to the conditions of the Bantu mother-language, from which all the other dialects diverged.

the spelling of this word could be reduced to Runsori, it would correspond more closely with one of the native designations.

After my own experience in regard to this mountain I am no longer surprised that explorers like Stanley in his first visit to these countries, like Emin Pasha, Sir Samuel Baker, Gessi, and all others who visited these regions prior to 1887, failed to discover in the Blue Mountains

125. AUTHOR IN "CLIMBING" COSTUME, CLOTHED TO RESIST COLD ON RUWENZORI

south of Albert Nyanza what is probably the highest point of the African continent, and what is certainly the greatest extent of snow and glaciation in Africa at the present day. We were within sight of Ruwenzori for three months and a half during our investigations of the Western Province of the Uganda Protectorate and of the adjoining regions of the Congo Free State, and only six times did we see the snows, except, of course, that period of a week spent more or less on the snow. And out of all these times when, in the early morning or late evening, we caught sight of the snow, we

only once saw without intervening cloud the whole snowy range. On this occasion, unfortunately, the photographs taken came out with plenty of foreground and practically no indication whatever of the snowy panorama behind; and the period during which the continuous range of snow was visible was too short for a sketch of any value or accuracy to be made.

126. DRACÆNAS ON RUWENZORI (6,000 FEET)

The same fate appears to have attended all my predecessors who were armed with a camera, a pencil, and a notebook, with the exception perhaps of Dr. Stuhlmann, who in his book gives us a sketch of the distribution of snow on the western aspect of the mountain. Even this sketch, however, is not a complete record of the entire range of snow-peaks. For myself,

piecing together as correctly as possible all my separate sketches and photographs of each of the peaks covered with snow or glaciers which were seen separately, I have arrived at a result (see p. 154) which may give an approximately correct representation of this snowy range as seen from the east. But this drawing, being intended to show the actual extent of snow, is taken from an imaginary standpoint to the east-north-east of Ruwenzori,

127. TREE-FERNS ON RUWENZORI AT 7,000 FEET

which would be of an altitude nearly as high as the range itself. It does not represent the actual aspect of the mountains from any accessible point of view to the east of it, because from the lower altitudes of Toro parts of the snow would be cut off by the intervening heights forming parallel ridges or divergent spurs of the main mass.

Ruwenzori is certainly, of all African mountains of my acquaintance, that

which is the most constantly cloud covered. For a month or more at a time no glimpse may ever be obtained of the snow. It would appear, however, that we visited this region at the worst time of the year for my purpose, and that our expedition would have had much better luck with regard to seeing the snows during November and December, which are said by residents to be the months of the clearest skies.

With regard to the highest point of this range, the selection would appear to lie between the peaks known to the natives as Kiyanja and Duwoni. These would be apparently the Semper Berg and Weismann of Stuhlmann. I must say, however, that I strongly object to christening the heights of Ruwenzori for all time with the names of German worthies like Kraepelin, Semper, Weismann, and Moebius, who are not all of them

128. *PODOCARPUS* ON RUWENZORI (7,500 FEET)

of world-wide reputation (however much they may be esteemed in their own country), and who have had absolutely no connection whatsoever with Africa or with Africa's highest mountain. The preferable plan would

DUWONI PEAK (RUWENZORI), AT DAWN.

be the search in the first place for clearly defined and easily pronounced native names, and in the event of these not being obtainable, to christen the separate peaks of Ruwenzori with the names of Stanley, Stairs, Emin,

129. *HYPERICUM* AND FERNS, RUWENZORI (10,000 FEET)

Bagge, Moore, Elliot, and Dr. Stuhlmann himself—of explorers who have from time to time contributed their share to the exploration of this Caucasus of Central Africa.

I am personally convinced that the highest point of Ruwenzori is not much under 20,000 feet in altitude, and that it will therefore be found to attain the greatest altitude on the continent of Africa. There must be nearly thirty miles of almost uninterrupted glaciers along the highest part of the ridge, and this under the equator must pre-suppose a very considerable altitude. Apart from which, when, after the most arduous climb I have ever experienced, I reached my highest point on the flanks of the snow-range—14,800 feet—the mountain above me seemed a thing I had only begun to climb, and towered, so far as I could estimate,

another 6,000 feet into the dark blue heavens. Permanent snow, however, lies as low as 13,000 feet, which also is the lowest point to which any glacier reaches, so far as my limited investigation extends.

To effect a complete and successful ascent of the highest points of

130. A GIANT GROUNDSEL (*SENECIO JOHNSTONI*) AT AN ALTITUDE OF 12,500 FEET

Ruwenzori requires as elaborate a preparation as the exploration of the Andes or Himalayas. An enormous deal remains to be done in the exploration of this the most important range of Africa. Hitherto we have had mere peeps at these series of snow-covered heights. The only Europeans who have as yet topped the snow of Ruwenzori are Mr. Bagge

(formerly collector for the Toro District), Messrs. Moore and Fergusson, and myself and my two companions,* and we have only touched it at one spot, the head of the Mubuko Valley. Ruwenzori is no Kilimanjaro or Kenya, no single snow-mass. It is a chain of heights like the Caucasus, with considerable intervals between the principal masses of snow and ice. The snow-peaks of this range probably extend over a distance of thirty miles from north to south.

The obstacles which prevented myself and other explorers from reaching

131. *LOBELIA STUHLMANNI*

the highest points of Ruwenzori were, firstly, the distances to be traversed at high altitudes, with a temperature not far off freezing-point; the extremely arduous nature of the last part of the climb, where precipitous walls of rock or ice require an Alpine equipment for their ascent; the non-existence of any guides whatever above snow-line; and deficiency in the means of transporting the necessary appliances for shelter and supplies

* W. G. Doggett and Wallis Vale. Subsequently Messrs. Wylde and Ward, of the Uganda Administration, ascended along our route to the snow, and were stopped by the same obstacles.

132. LOBELIA DECKENI

of food. Above 13,000 feet it is difficult to see where shelters could be formed or tents pitched which would protect the explorer from the severe cold prevailing at night-time, as the rocks and glaciers were so precipitous. Even between 9,000 and 13,000 feet it is extremely difficult to find a dry spot on which to pitch a tent or to build a hut. The ground above 9,000 feet and up to the snow level is almost everywhere either bare rock or wet moss, sodden vegetation into which one may easily sink to the knees. This belt round the mountain is simply a sponge, over which it is impossible to pass dry-shod. Mr. Bagge, formerly collector for the Toro District, and now a sub-commissioner in East Africa, deserves credit for making a rough corduroy road, with the help of the natives, over this marshy belt between 9,000 and 13,000 feet; but even he could do little to mitigate the difficulties of the ascent in many places.

After going nearly all round the base of Ruwenzori, from the north southwards and back to the north-west, during the months of June, July, and August, I made arrangements in September to attempt the ascent of the higher snow-peaks by way of the Mubuko Valley. The natives had informed Mr. Bagge that the Mubuko Valley was the only possible means of reaching the snow by any ordinary feats of climbing, and it was due to guides furnished by Mr. Bagge that Messrs. Moore and Fergusson were enabled to make their partial ascents in this direction. I followed along the same route. After passing through tropical scenery of the usual luxuriance to be expected in a well-watered part of Equatorial Africa, I

I call them awful because they are so, rising up precipitously thousands of feet above the narrow river valley into cloud-land—I venture to call them the Portal Peaks, and this name will also serve to commemorate the services of Captain Raymond Portal, the brother of Sir Gerald Portal, whose political work in the Toro District, short though it was, has proved of inestimable benefit to the country.

134. *SENECIO JOHNSTONI* HUNG WITH *USNEA* LICHEN

The following may be a useful summary of the general character of the vegetation on the slopes of Ruwenzori between 6,000 and 15,000 feet. At 6,000 feet dracænas and tree-ferns mingle with the tropical forest. A large daisy growing in the grass-land has a strangely northern look. Buttercups and forget-me-nots also make their appearance at this altitude, though they are not abundant until 7,000 feet is reached; tree-ferns do not ascend above 7,000 feet. At this altitude the forest begins to lose its tropical character, and a conifer (*Podocarpus*) makes its appearance,

and ranges between this height and 10,000 feet. I noticed on Ruwenzori *no species of juniper*, though I have seen junipers on Elgon and all the eastern heights of the Uganda Protectorate. I do not know if this conifer, so common in Abyssinia and on the high mountains of Eastern Africa, is

135. MOSSES COVERING TRUNKS OF TREE-HEATHS, RUWENZORI (11,000 FEET)

absent from Ruwenzori. The *Podocarpus* tree is a handsome object; the leaves are much longer than in the yew, so long that they almost look like the foliage of the eucalyptus. The old leaves are a rich dark glossy green, and the new leaves a vivid yellow-green, so that the foliage is full of colour, the more so as the catkins and cones are a lovely mauve-pink. The *Podocarpus* gives out a smell exactly like the English

10,000 feet a fine *Hypericum*, growing as quite a tall tree, makes its appearance. This has very large flowers, with a calyx that is bright yellow inside, but vivid crimson on the outer side of the petals. Between 7,000 feet and 9,000 feet the Abyssinian violet grows abundantly. Moreover, there is a bramble, the flower of which is strangely similar to that of a wild rose.* This bramble has a large fruit like an English blackberry. Another bramble or raspberry has a fruit the size of a strawberry, but in appearance somewhat like a hop. Umbelliferous plants

138. A HOT SPRING, EASTERN SIDE OF RUWENZORI, CLOSE TO RUIMI RIVER, AT 5,500 FEET

like wild carrot or hemlock grow luxuriantly between 8,000 and 11,000 feet. A *Senecio*, or giant groundsel (exactly like *Senecio johnstoni* of Kilimanjaro, but, I am informed, a species new to science), commences at 8,500 feet and grows at least as high as altitudes of 15,000 feet. *Habenaria* ground orchises grow from 9,500 to 11,000 feet. A flower very like the English "lady's-smock" grows between 8,500 and 12,000 feet; a white flower of the cabbage order grows under cliffs at 12,500 to 13,000 feet.

Perhaps the most remarkable feature in the vegetation of the upper

* *Rubus doggetti.*

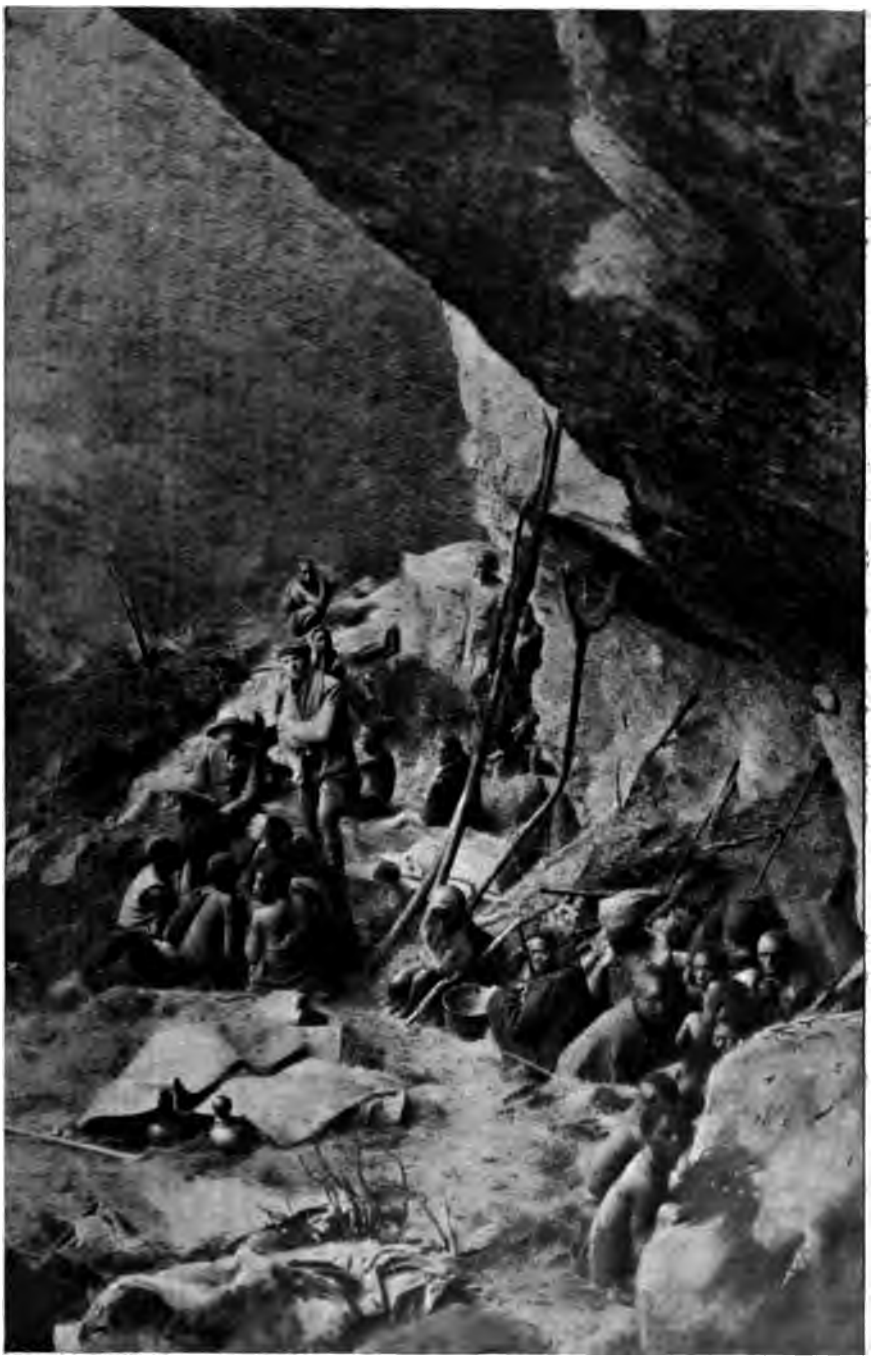
139. VEGETATION (LOBELIAS AND SENECIOS) ON RUWENZORI AT 8,500 FEET (MUBUKO VALLEY)

parts of Ruwenzori are the lobelias. These are of two kinds, and are so utterly distinct one from the other in form that no one but a botanist would know that they were closely related. One of these lobelias, perhaps offering two separate species,* begins to make its appearance above 7,000 feet, and continues (or else reappears again in a closely allied form) right up the mountain to the very verge of the snow, and in places without

140. "A MOST ARDUOUS CLIMB": OUR WAY UP THE MOUNTAIN OVER TREE-TRUNKS AT 10,000 FEET

snow to 15,000 feet. This lobelia grows exactly like a dracæna. As the plant shoots upwards the lowest leaves fall off the stem, leaving it round and smooth, so that when the plant has attained its maturity it exhibits a large bunch or mop of sword-like leaves at the end of a woody stem of small diameter, and about twenty feet and over in height. From the middle of the mop of leaves there starts a flower-spike, which may be as much as three feet in height. This is at the same time very

* One would seem to be *Lobelia stuhlmanni*.



141. A ROCK SHELTER, RUWENZORI (BUAMBA CAMP, 11,500 FEET)

slender, and is covered throughout the whole of its length with blossoms concealed from sight by large green bracts. The blossoms, when examined, are found to be of a greenish white, inclining to red. The other kind of lobelia (*L. deckeni*) is also found (?) on Mounts Kilimanjaro and Kenya. Its general appearance is best described by the accompanying illustration.

142. "A BEAUTIFUL SWAMPY GARDEN": UPPER MUBUKO VALLEY AT 11,000 FEET

It reaches to a total height of about fifteen feet above the ground. The flower-stalk is sometimes nearly six feet long, and is much thicker and larger than the first described lobelia. The green bracts to a great extent conceal the ultramarine-blue flowers, which grow at right angles to the stalk, though when the flowers are absolutely mature they reveal for a day or two an exquisite shimmering of blue all up and down the stalk. These lobelias, with their aloe-like leaves and strange flower-columns, remind one,

143. *LOBELIA DECKENI*, SENECIOS, TREE-HEATHS, AND EVERLASTING FLOWERS IN UPPER MUBUKO VALLEY AT 11,300 FEET

I cannot say why, of monuments in a cemetery. They would certainly be handsome additions to our ornamental flora. Allusion has already been made to the *Senecios*, or giant grounsel, on the upper part of the mountain. The authorities at Kew state that the specimens we sent home show this to be a new species, but in outward aspect it scarcely differs from the giant *Senecio* which I discovered on Kilimanjaro. Like that plant, it grows to a height of over twenty feet, and has broad, bright green leaves like a cabbage, or even in some aspects like a banana. The flower-stalks grow

144. WATERFALL AT BUAMBA CAMP

above the leafage to the extent of perhaps two feet, and their masses of flowers are a dull amber-yellow. The plant would be handsome but for the swollen, gouty stem. Very often, however, all the lower part of it is exquisitely draped by long fringes of the *Usnea* lichen, and then it is a really beautiful object in the landscape.

A description of the upper parts of Ruwenzori would not be complete without an allusion to the extravagant development of mosses on the tree-trunks between 11,000 and 12,000 feet. This growth of moss is extraordinarily thick. Perhaps it would give a depth of eighteen inches before the stem or trunk on which it grows was reached by a probing

instrument. A portion of one's road up the mountain lies for perhaps two miles over a constant succession of prone tree-trunks. For ages past tree after tree in this wintry-looking forest has fallen from old age or in storms, to lie prone where it fell, apparently without insects to turn its wood to powder. On the contrary, this wood becomes hard like bog-oak, and is covered with this thick growth of moss. But the moss makes these tree-trunks most deceptive and dangerous to step on, as it is so lightly attached that it slips away from under the foot, and the incautious traveller may fall and hurt himself most cruelly against the jagged branches of the trees, which have been turned to a flinty hardness. But these mosses give one a perfect feast of colour. They range in tint from lemon-yellow up through all the gamut of yellows and browns to a deep rich red, a red which at times has almost a purple tinge. Sometimes the moss is an emerald-green, and the limbs of the same tree may display every shade ranging between purple-red and grass-green, a large proportion of the colours being shades of orange and yellow. Yet the forests of this cold zone of Ruwenzori at a distance fuse their tints into rather a dreary tone of drab-green, and the long streamers of the greenish white *Usnea* give the vegetation a singularly dismal aspect. It is, perhaps, at about 9,000 feet that the European traveller feels most at home, and at that altitude many of the flowers, and not a few of the trees and ferns, recall to him the woods of his own country.

Leopards ascend the mountain to the very verge of the snow, and we actually found a leopard's footprints in the snow at 13,400 feet. The tracks of a large serval cat, probably the servaline, were found at 12,500 feet. There are two kinds of hyraxes on Ruwenzori at least, if not more, and they also ascend to the snow-line. Bats were found up to 13,000 feet. Chameleons were found up to 11,000 feet, and a whitish moth fluttered about over the snow. A large eagle owl was seen, but not secured, at an altitude of 13,000 feet; and at this height a common bird was a kind of starling with a fan-shaped tail, very similar to one which we saw and obtained at 7,000 feet on Mount Elgon. We saw elephants on Ruwenzori, but not higher than 7,000 feet. Monkeys do not appear to go above 9,000 feet. A few rats were obtained not far from the snow-line, and francolin, very partridge-like in appearance, were met with as high as 13,000 feet.

The rocks in many places are very micaceous. In some of the caverns which are to be described farther on, the overhanging roof of rock was like tarnished silver, and had much the appearance of the beautiful aluminium ceiling to be seen at Sir Alma Tadema's house at St. John's Wood. A good deal of granite crops out between 10,000 and 11,000 feet. Many

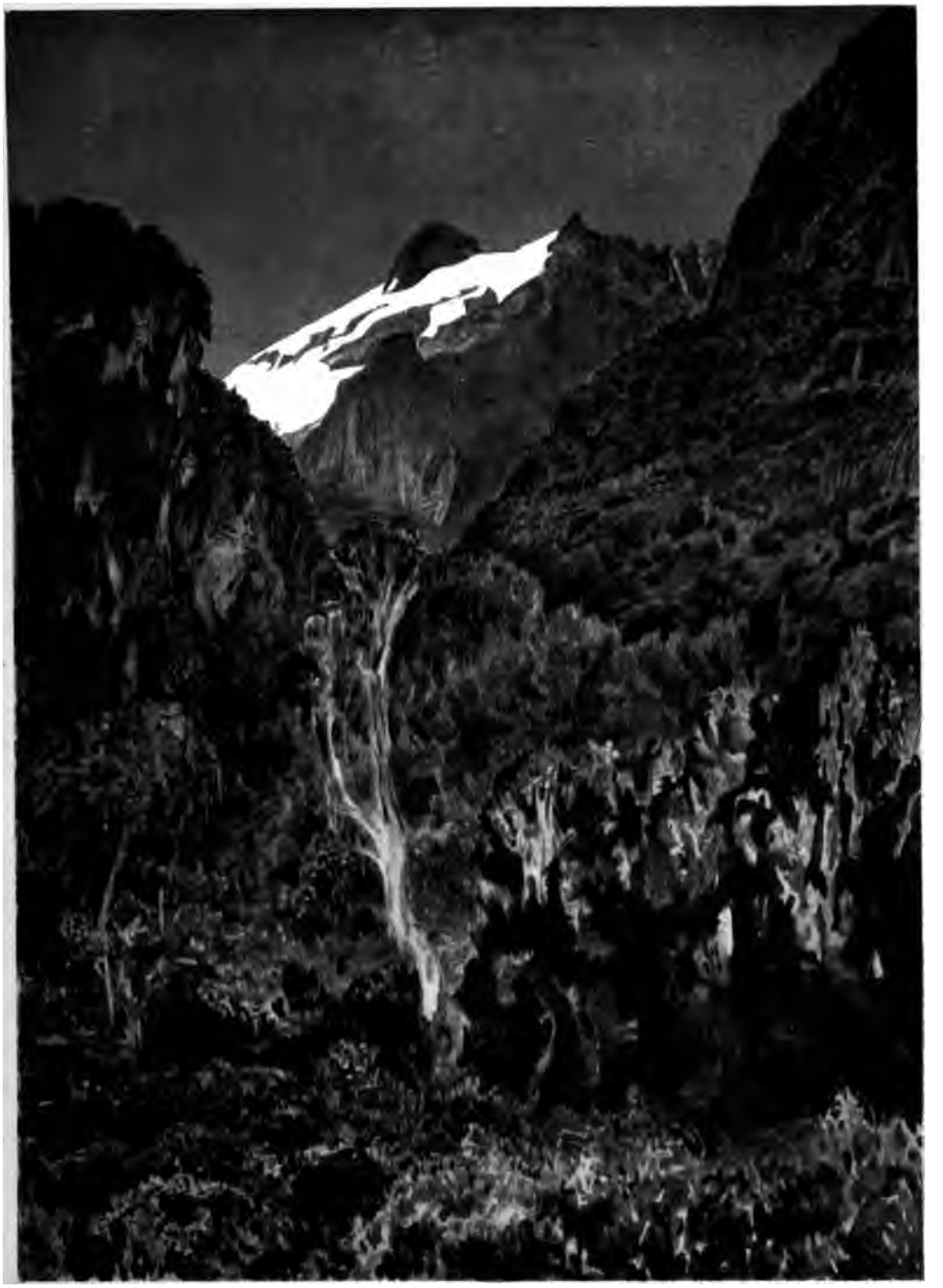
of the stream valleys exhibit rocks that are almost jet black in colour, with white veins of quartz.

Among the volcanic foot-hills of Ruwenzori which fringe the northern and eastern borders of the mountain range, there are so many crater lakes that I have hardly been able to keep account of the number visited or seen. All of these, with one exception (so far as my knowledge

145. VIEW OF KIYANJA PEAK FROM UPPER MUBUKO VALLEY AT 11,300 FEET

goes), are not situated at altitudes much above 5,000 feet. But there is one crater lake which must be at an altitude of 8,000 feet, and which is situated on the southern side of the Mubuko Valley. This is the highest and nearest to the snow of any obvious evidence of former volcanic action which I have encountered on Ruwenzori.* I am quite disposed to agree with Mr. Scott-Elliot, who I think was the first to point out that, although

* I have visited two of the seven or eight hot springs found on the lower slopes of Ruwenzori, between 6,000 and 4,000 feet.



Kiyanja Peak of Ruwenzori, from the Mubuko Valley; Mid-day.

146. VIEW OF KIYANJA PEAK FROM BUAMBA CAMP, 11,500 FEET (THE TREES ARE ARBOREAL HEATHS)

Ruwenzori exhibits traces of volcanic activity on its outskirts, it is not, as a mountain range, of volcanic origin like Kenya or Kilimanjaro.

On the eastern side of the mountain, and for aught I know on the western

147. "BLACKBERRIES ON RUWENZORI": THE FRUIT OF *RUBUS DOGGETTI*, 12,500 FEET

side likewise, permanent snow lies at the relatively low altitude of 13,000 feet. After heavy showers of rain in the lowlands, freshly fallen snow may be seen on the lower heights of Ruwenzori at 11,000 and 12,000 feet, but it does not lie very long; whereas snow lies in patches more or less

permanently at 13,000 feet. The lowest point of the lowest glacier that we visited was 13,200 feet in altitude, but evidence of glacial action in

149. THE BASE OF THE MUBUKO GLACIER (13,000 FEET)

the valleys extended 3,000 feet lower. The thunderstorms which are of such frequent occurrence along the lower slopes of Ruwenzori do not appear to mount higher than 9,000 feet. Above that altitude rain falls

150. "ICE AND SNOW UNDER THE EQUATOR": THE MUBUKO GLACIER AT 13,500 FEET

finely—not in heavy drops—but every day. Rain often turns to hail, sleet, or snow at 13,000 feet.

From Bihunga, the last permanent habitation of man in the Mubuko Valley (the exact altitude of which was 6,858 feet *), we ascended along a native path to a camping-place underneath a huge rock at the head of the left branch of the Mubuko Valley. The altitude here by boiling-point was 9,762 feet.† This was the first of the extraordinary series of rock shelters which served as camping-places to Europeans and natives ascending the mountain by means of the Mubuko Valley. The camping-places consist of small areas of absolutely dry soil under an over-reaching cliff of micaceous rock. Two yards, three yards, four yards away from the shelter of the overhanging ledge the ground is an impassable bog. Immediately under the arch it is bone-dry. However convenient, I doubt if there is permanent safety under these rock shelters, since it would seem as though from time to time fragments of micaceous rocks detached themselves from the overhanging roof. In this way these cliffs are probably crumbling away by degrees at their base, infiltration of water from the bogs above no doubt being the cause. From this second camp, which was called by the natives Kichuchu, we had a most arduous climb, sometimes dragging our bodies up the bed of a small torrent, and being nearly drowned in the process. For miles we walked, as I have already said, along slippery tree-trunks, often unable to see through the crevices any solid ground beneath us.

At length we reached the edge of the upper valley of the Mubuko River, and found for a couple of miles or more a charming tract of flat country like a beautiful swampy garden. Here, too, we found the largest of these rock-camps under huge, overhanging cliffs. This other camp was called by the natives Buamba, which really means "up above," "*the* height" *par excellence*. The altitude of Buamba camp was 11,447 feet.‡ The next day we climbed for a little under two hours, and reached the last of the rock shelters at an altitude of about 12,500 feet. From or near here we obtained suddenly a splendid view of the snows of Ruwenzori. Looking up the main Mubuko Valley, we saw a fine panorama of snow-fields and glaciers; but westwards appeared to be the highest point of Ruwenzori, a huge black knob rising out of the snow-fields of unruffled purity and dazzling white. From the last of the rock shelters we directed our steps towards where the ascent of the snow-range seemed most practicable, namely, the Mubuko glacier. The altitude of the base of this glacier was 13,191 feet.§ We found it was impossible to climb higher in this direction

* Water boiled at 200·1° Fahr.; temperature, 58°.
† Water boiled at 195·1° Fahr.; temperature, 52°.
‡ Water boiled at 192·2° Fahr.; temperature, 47°.
§ Water boiled at 189·3° Fahr.; temperature, 47°.

151. ON THE ICE OF THE MUBUKO GLACIER (13,534 FEET)

finely—not in heavy drops—but every day. Rain often turns to hail, sleet, or snow at 13,000 feet.

From Bihunga, the last permanent habitation of man in the Mubuko Valley (the exact altitude of which was 6,858 feet *), we ascended along a native path to a camping-place underneath a huge rock at the head of the left branch of the Mubuko Valley. The altitude here by boiling-point was 9,762 feet.† This was the first of the extraordinary series of rock shelters which served as camping-places to Europeans and natives ascending the mountain by means of the Mubuko Valley. The camping-places consist of small areas of absolutely dry soil under an over-reaching cliff of micaceous rock. Two yards, three yards, four yards away from the shelter of the overhanging ledge the ground is an impassable bog. Immediately under the arch it is bone-dry. However convenient, I doubt if there is permanent safety under these rock shelters, since it would seem as though from time to time fragments of micaceous rocks detached themselves from the overhanging roof. In this way these cliffs are probably crumbling away by degrees at their base, infiltration of water from the bogs above no doubt being the cause. From this second camp, which was called by the natives Kichuchu, we had a most arduous climb, sometimes dragging our bodies up the bed of a small torrent, and being nearly drowned in the process. For miles we walked, as I have already said, along slippery tree-trunks, often unable to see through the crevices any solid ground beneath us.

At length we reached the edge of the upper valley of the Mubuko River, and found for a couple of miles or more a charming tract of flat country like a beautiful swampy garden. Here, too, we found the largest of these rock-camps under huge, overhanging cliffs. This other camp was called by the natives Buamba, which really means "up above," "*the* height" *par excellence*. The altitude of Buamba camp was 11,447 feet.‡ The next day we climbed for a little under two hours, and reached the last of the rock shelters at an altitude of about 12,500 feet. From or near here we obtained suddenly a splendid view of the snows of Ruwenzori. Looking up the main Mubuko Valley, we saw a fine panorama of snow-fields and glaciers; but westwards appeared to be the highest point of Ruwenzori, a huge black knob rising out of the snow-fields of unruffled purity and dazzling white. From the last of the rock shelters we directed our steps towards where the ascent of the snow-range seemed most practicable, namely, the Mubuko glacier. The altitude of the base of this glacier was 13,191 feet.§ We found it was impossible to climb higher in this direction

* Water boiled at 200·1° Fahr.; temperature, 58°.
† Water boiled at 195·1° Fahr.; temperature, 52°.
‡ Water boiled at 192·2° Fahr.; temperature, 47°.
§ Water boiled at 189·3° Fahr.; temperature, 47°.

151. ON THE ICE OF THE MUBUKO GLACIER (13,534 FEET)

without more elaborate preparations than we had made in the way of ropes and axes, so we returned for a while to Buamba camp to rest and botanise.

Next day, instead of attempting the ascent by way of the Mubuko glacier, we followed probably the same route as Mr. Moore, and tried to ascend the mountain more or less midway between the Mubuko glacier and the highest peak—the peak which the natives call Kiyanja. In this way, after difficulties of the most exhausting nature and in the middle of a snowstorm, we reached an altitude of 14,828 feet,* and here we were obliged to stop. My two European companions (Doggett and Vale) were fairly exhausted with the cold, and perhaps with a touch of mountain sickness. Still more serious, our native Bakonjo guides and our Swahili porters were positively ill with the cold, in spite of our having clothed them in warm jerseys, coats, and blankets. The condition of some of the natives, in fact, was so bad that I am sorry to say one of them eventually died of pneumonia, and all were so ill that I dared not stop any longer at this altitude under such inclement conditions. We therefore returned once more to camp.

The next attempt we made at an ascent was again in the direction of the Mubuko glacier. We were confronted here by a wall of rock about seven feet in height, which at first seemed difficult to ascend, until the idea occurred to me of using my very tall Sudanese orderly as a human ladder. Doggett mounted on his shoulders, and managed to scramble over the ledge above. He then fastened a rope on boulders, and we each dragged ourselves up. After this we had to pass through a natural tunnel in the rock, which had been bored by a stream flowing from the glacier. As the tunnel was partly filled up by the stream in question, which was icy cold, this passage was very disagreeable. By one means or another we reached an altitude of 13,534 feet † on this glacier, and here our further progress was barred by walls of ice at least fifty feet in height, and absolutely precipitous. We did a good deal of photographing here, but on our descent Doggett became so ill from the cold and the wetting with the icy water, that we were obliged to return to our permanent camp. The next day I made another abortive attempt to ascend the mountain, but illness was beginning to tell on all my companions, black and white, and I was afraid, if I did not descend to a warmer climate, there would be no one but myself left to tell the tale. Pneumonia seemed to afflict many of the men, and the disease made such rapid progress that the patient was almost beyond recovery before attempts could be made to arrest the malady. In this way we lost the best of our native guides, to my very great regret, and two of our Swahili porters. For myself, I can only say

* Water boiled at 186·6° Fahr.; temperature, 40°.
† Water boiled at 188·5° Fahr.; temperature, 37°.

152. AN ICE CAVERN, MUBUKO GLACIER (13,534 FEET)

that the short stay amid the ice and snow of Ruwenzori seemed to do my health as much good as if I had been to England.

The whole time of our stay on Ruwenzori the weather was, with very few and brief exceptions, atrocious. It rained constantly, and at high altitudes it snowed and hailed. The arrival of clouds had about it something positively alarming to our black followers and to the two Europeans accompanying me, who had had no previous experience in mountaineering. The clouds would come rushing up the Mubuko Valley like express trains

153. THE ICE MELTING: SOURCE OF THE MUBUKO RIVER (13,534 FEET)

one after the other, and they did not appear as vague mists, but as bodies of singular definiteness of outline which constantly seized and enveloped you as in a thick blanket. You might be sitting for a few minutes in brilliant, welcome sunshine, looking at the blazing white snow-fields and the minutest detail of the rocks and boulders. Suddenly an awful greyish white mass would come rushing at you, and everything would be blotted out. Even your companions four or five yards off were scarcely visible. Although I told myself there was no danger in this, the effect on the spirits was singularly depressing and alarming, especially as this occurred

Gallirex johnstoni, THE TURACO OF RUWENZORI.

in dangerous bits of climbing. Sometimes a thick bank of cloud would enfold us for a quarter of an hour.

154. THE UPPER PART OF THE MUBUKO GLACIER NEAR THE SOUTHERN BASE OF DUWONI PEAK

On neither side of the flanks of Ruwenzori, except perhaps on the extreme north-west corner, do the tropical forests quite attain the same extravagant development of vegetation as the never-to-be-forgotten Congo

or Uganda forests. But they contain some handsome trees, not a few of which are remarkable for the brilliant colour of their flowers. The forests in the tropical zone round Ruwenzori between 4,000 and 7,000 feet are frequented by a rare species of colobus monkey, new to science, which has long black hair with a very small proportion of white; and by what is probably the most beautiful species of the turacos in regard to coloration. This bird (*Gallirex*), which Doggett and myself had the good fortune to discover, has a coloration which includes such tints as pure emerald-green, pale grass-green deep ultramarine-blue, mother-of-pearl, crimson,

155. TROPICAL FOREST AND HOT SPRING, NORTH-WEST FLANKS OF RUWENZORI (THE NATIVES ARE BAAMBA)

purple, and rose colour! In the lower part of these forests, on the edge of the more cultivated country, a bird very commonly seen is the crimson-breasted barbet. When a number of these scarlet and blue-black birds with large ivory-coloured beaks have collected together on the bare branches of a tree or shrub, they are very noticeable.* In these Ruwenzori forests there are extraordinary chameleons of rather large size, which develop horns or grotesque scaly projections like enormous noses. These will be found illustrated in the chapter dealing with zoology.

* See coloured illustration facing p. 187.

CRIMSON BREASTED BARBETS.

The villages of the Bakonjo and Baamba are often very prettily perched on the summits of subsidiary supports of the mountain at altitudes of 6,000 or 7,000 feet. These little collections of neat huts, made of banana leaves, are ensconced in sheltered nooks on ledges and platforms overhanging great precipices. These people dwell no higher than the banana will flourish, though in their hunting expeditions after the hyrax, whose flesh they love, they go sometimes to the verge of the snow. They are very fond of smoking hemp or tobacco, but especially hemp, in pipes made of the long stem of a banana frond. These people wear little or nothing in the way of clothing when in their homes. They start for their excursions towards the snow-line shielded at most by capes of hyrax or monkey fur. When these men were with me about the snow and ice, I supplied them with blankets, but they would often leave these behind in the rock shelters where we were camped sooner than have the bother of carrying them.

It is curious that the southern prolongation of the Ruwenzori range towards Lake Albert Edward should exhibit a certain tendency to drought and a relatively poorer vegetation, with a greater proportion of bare rock, than the other parts of the mountain east, west, and north, whereon a rainfall of over 100 inches a year is precipitated. At the base of these southern spurs of Ruwenzori the country has quite a parched and sterile aspect. This is something like, though not so plainly marked, the contrast between the south side and the north side of Kilimanjaro, though in the case of the last-named mountain it is the south side which is endowed with a heavy rainfall and abundant vegetation.

The country round the base of Ruwenzori is very often subject to earthquake shocks. These are sometimes severe enough to lay buildings of wattle and daub in ruins. Hot springs, as I have already mentioned, are found at intervals all round the lower parts of the mountain, and the chain of extinct craters with crater lakes in them extends almost unbroken from the north-western part of Ankole to the north end of Ruwenzori, along the foot-hills. Some of these crater lakes of East and North Toro are as beautiful as those I have described in Ankole, and contain small fish and numbers of duck and grebe, the large-crested grebe, as well as the small South African dabchick.

CHAPTER VI

THE SEMLIKI VALLEY AND THE CONGO FOREST

THE present boundary between the Congo Free State and the Uganda Protectorate is somewhat unsatisfactory, as it does not coincide with the natural features of the country. It consists of the thirtieth degree of east longitude from the vicinity of the Mfumbiro mountains to the south of Lake Albert Edward, and thence northwards past the western flanks of the Ruwenzori range, and across the Semliki River to the water-parting between the Nile and Congo systems on the Bulega heights to the north of the Semliki. Thence the boundary is carried north-west along this line of water-parting to Mahagi, on the north-west corner of the Albert Nyanza. Why the course of the Semliki River from Lake Albert Edward to some point near the Albert Nyanza was not chosen as the boundary over part of this line instead of a degree of longitude, it is difficult to understand. The result is, however, that both sides of the Upper Semliki are within the Congo Free State, while both sides of the northern half of the Semliki belong to Great Britain.

The traveller who desires to reach the north-eastern portion of the Congo Free State from Uganda at the present day would almost certainly follow the safe and fairly well-made road which runs from Fort Portal to the south end of Ruwenzori, and thence turns north-westwards to the ferry of the Semliki River, opposite Fort Mbeni. This is preferable, as far as convenience of travel is concerned, to journeying round the north end of Ruwenzori and through the dense, hot Semliki Forest, which stretches between the Bulega heights and the north-western flanks of the Ruwenzori range. I have already explained that any one reaching the south end of Ruwenzori is surprised to meet with a certain amount of aridity in the landscape, to encounter streams flowing often with a mere trickle, and scanty grass and poor vegetation, generally of a burnt-up aspect, in between the watercourses. This somewhat desert appearance may be partially due to the extent to which the soil is impregnated with salt. But this dry East African appearance of the landscape and flora continues along the north coast of the Albert Edward Nyanza and over the southern half of

the Semliki Valley, on both sides of the stream, and is carried thence south-westwards in a great loop over high mountain ranges to within sight of Tanganyika.

The great Congo Forest, which, before the invasion of the Arabs and the destruction of the trees for making plantations, extended almost up to the western shores of Lake Tanganyika, leaves the vicinity of the north end of that lake, and retreats in a north-westerly direction well into the Congo basin; then after describing a curve, the limit of the forest begins to extend towards the north-east, and, leaving this loop of high and dry country west of Lake Albert Edward untouched, it descends to the Semliki River at the point where Fort Mbeni is situated, or pretty nearly in the middle of the Semliki's course between Albert Edward and Albert Nyanza. A little lower down the stream than the station of Fort Mbeni, the forest crosses the Semliki River, and extends to the north-western flanks of Ruwenzori. There is a slight dip at the back of Fort Mbeni in the highlands, west of the Semliki River, which constitute the water-parting between the systems of the Congo and the Nile. The Congo Forest pours over this lowering of the mountain ridge into the valley of the Semliki. Some distance to the north of Fort Mbeni, however, the heights of the Congo watershed soar to altitudes of over 8,000 feet in the so-called Bulega country, and the forest does not climb to this lofty plateau, which remains a grass-land, and expands northwards (west

156. A *BORASSUS* PALM, SEMLIKI VALLEY

of Lake Nyanza) to the savannah country along the west side of the White Nile.

The southern half of the Semliki Valley lies at an average altitude of just over 3,000 feet. The Semliki River, in its middle course through the forest regions, has a series of falls and rapids which brings its waters down to the level of Lake Albert (2,170 feet). The upper part of the Semliki Valley is a fine-looking country of park-like aspect, containing very few inhabitants and a good deal of big game. The ground of the valley is by no means flat, but much broken with low ranges of hills and curious hollows, gullies, and gorges. The grass is long, but not generally the coarse elephant grass that is such a burden to humanity in the well-watered parts of East and Central Africa. This park-like scenery along the Upper Semliki is picturesquely dotted with fine *Borassus* fan palms and umbrageous acacias, looking sometimes almost like cedars in their growth, with short red trunks and great flat masses of dark green foliage. The waterbuck inhabiting all this region carry exceptionally fine horns, and constitute a marked and beautiful feature, moving about in large numbers, and looking singularly like red deer. Both males and females of this variety tend to considerable redness of coat, the male having portions of the head and chest quite a bright chestnut. There are still a few buffalo of the South African type lingering on the Upper Semliki. It is curious, however, that the instant you enter the Congo Forest you meet with other buffalo of the most exaggerated Congo type—that is to say, small in size, covered with thin red hair, and carrying small horns, which are little more than a most exaggerated frontal boss with a hook-like horn growing out of it. Zebras are also found on the Upper Semliki and to the west of Lake Albert Edward—that is to say, to the very verge of the Congo Forest. Large griffon and eared (*Otogyps*) vultures haunt this grass country of the Upper Semliki, thereby adding to its East African appearance. As is probably known to most of my readers, the forest regions of Africa are, to a great extent, without vultures, the only species of vulture ever found in them being the small dark brown *Necrosyrtes*, familiar to any one who has visited Sierra Leone, in which town it is a great scavenger.

The Upper Semliki is not even bordered with many trees other than a few wild date palms and acacias. It flows for the most part a broad, white ribbon through a grassy country. There are but few human beings inhabiting this region at the present time. What there are are mainly Bakonjo, the same people who inhabit the western, southern, and south-eastern flanks of Ruwenzori up to an altitude of 7,000 feet; and the Banande, who seem to be usually the people of the lowlands, as contrasted with the Bakonjo, the people of the highlands. The Bakonjo extend in

HEAD OF A SEMLIKI WATERBUCK (*COBUS DEFASSA*)

157. WATERBUCK OF UPPER SEMLIKI VALLEY

their range over the high mountains to the west of Lake Albert Edward. They are, as a rule, a personable lot of negroes with not particularly ugly features, very like the better-looking Atonga of the west coast of Lake Nyasa. But the Banande are of exceedingly low appearance, and constitute the ape-like negroes to which reference will be made in the chapter on anthropology. The Banande do not appear to have any separate tribal organisation, but rather attach themselves to the Bakonjo villages on one side of the Semliki, and to the Babira settlements in the Semliki forests. They are generally characterised by their stumpy legs, long arms, protruding brow ridges, and a marked degree of prognathism. Very often their skin is of a dirty yellow-brown.

A small Belgian station has recently been established on Lake Albert Edward at the mouth of the Nyamukasa River, near to Fort George on the British side; but at the time of my journey into this part of the Congo Free State there was no station nearer to the British frontier than Karimi, a large village of the Bakonjo, not far from the Semliki River. At Karimi some fairly good buildings had been erected for the accommodation of Europeans, and there was a garrison of negro soldiers (Manyema) under a negro non-commissioned officer. These soldiers were very smartly dressed in a becoming uniform of blue and red. They drilled in French, with the same quaint travesty of the language as may be noticed amongst Sikhs and other natives of India who drill in what they believe to be English.

From Karimi north-westwards a considerable journey of some thirty miles has still to be made before the traveller comes to the ferry of the Semliki River, which is opposite Fort Mbeni. A mile or so before he reaches this ferry he arrives at a broad, well-made road with a splendid avenue of useful trees and bananas. He sees good, substantial buildings for the housing of troops and workers, or merely as the dwellings of natives who have gathered round the station. The passage of the Semliki is made at present in a very large dug-out canoe with a broad flat bottom, which is perfectly steady and safe, and is big enough to transport cattle or horses. The stream of the Semliki is here very swift, and shortly afterwards to

158. THE SEMLIKI RIVER OPPOSITE FORT MBENI

the north descends in rapids. The river swarms with crocodiles, and therefore these large canoes are necessary to ferry men and live-stock across, the river also being far too deep to wade in any case. Arrived at the opposite bank, a steep climb up a broad road has to be made before the fort is reached, and here one is fairly taken aback at the beautiful situation and the excellent houses. I am afraid there is at the present moment nothing so good to show in the Uganda Protectorate in the way of well-built European houses or barracks for native troops and workers. The native villages which cluster round this centre are also remarkably tidy, and the houses are well-built and comfortable.

Fort Mbeni is a most picturesque place. In clear days it has a glorious

Mbeni is thought to be a fairly healthy station, though its altitude above sea level is not more than 3,500 feet. Two miles to the west of it the great Congo Forest begins. It was at Mbeni, as will be related in Chapter XII., that we first got on the track of the okapi. Consequently I became very eager to enter the Congo Forest and commence the search for this animal. I desired also to reinstate a number of Congo Pygmies in their homes, and see what these homes were like. A few months before my arrival an enterprising German had come to Fort Mbeni from Uganda, and had asked permission to recruit a number of Dwarfs to be shown by him at the Paris Exhibition. The Belgian officer in charge of Mbeni did not think this proposal would be favourably received by the Governor of the Province, because it was believed that a considerable mortality would take place amongst these little people if they were removed from their native forests. He therefore informed the German that it would probably be impossible to grant his request, though the matter would be referred to the Governor for decision. The German agent did not press the matter in conversation, but asked for guides to take him to the Dwarf settlements in the forest at the back of Fort Mbeni so that he might study the habits and customs of these people. Guides were given to him, together with a few native soldiers to form his escort.

In this way he reached the village of a Mukonjo chief called Lupánzula, who was a great friend of the Dwarfs and able to get in contact with them. The German entered into friendly relations with the Dwarfs, giving them beads and cloth and tobacco, and after a day or two he proposed that large numbers of them should assemble at an Mbuba village, some distance to the north, in the forest. On some pretext he sent his guides and escort back to Mbeni, saying that he would return unaccompanied through the forest to British territory. Having assembled the Dwarfs in large numbers, he suddenly surrounded them with his Swahili porters and askaris and informed them that they were his prisoners and would have to proceed with him to Uganda. Many of the Pygmies succeeded in running away, but nineteen were captured. With these he started (I must say with considerable pluck) to thread his way through the appallingly dense forest down to the Semliki River, and across that river to the District of Toro. He lost many of his Dwarfs on the way, but eventually arrived in Uganda with nine. Meantime, the Belgian authorities, hearing of his unlawful action, had written to us at Entebbe. We therefore caused the German in question to be arrested, and took from him the Dwarfs, whom I afterwards escorted to the Congo Free State to be repatriated.

Accompanied by Mr. Karl Eriksson, of the Congo Free State service, and a small escort of Manyema soldiers, I started with my caravan for

mutilations—which, as only a negro could, they had survived—had been the work of the Manyema slave-trader and his gang, done sometimes out of wanton cruelty, sometimes as a punishment for thieving or absconding. May it not be that many of the mutilated people of whom we hear so much in the northern and eastern part of the Congo Free State are also the surviving results of Arab cruelty? I am aware that it is customary to attribute these outrages to the native soldiery and police employed by the Belgians to maintain order or to collect taxes; and though I am fully aware that these native soldiers and police under imperfect Belgian administration, as under imperfect British control, can commit all sorts of atrocities (as we know they did in Mashonaland and in Uganda), every bad deed of this description is not to be laid to their charge, for many outrages are the work of the Arab traders and raiders in these countries, and of their apt pupils, the Manyema. This much I can speak of with certainty and emphasis: that from the British frontier near Fort George to the limit of my journeys into the Mbuba country of the Congo Free State, up and down the Semliki, the natives appeared to be prosperous and happy under the excellent administration of the late Lieutenant Meura and his coadjutor, Mr. Karl Eriksson. The extent to which they were building their villages and cultivating their plantations within the precincts of Fort Mbeni showed that they had no fear of the Belgians, while the Dwarfs equally asserted the goodness of the local white men. I am not prepared to defend the Congo Free State from its British or foreign critics, any more than I am prepared to assert that the British exploration and administration of Negro Africa has never been accompanied by regrettable incidents. I can only state in common fairness that that very small portion of the Congo Free State which I have seen since these countries were administered by Belgian officials possessed excellent buildings, well-made roads, and was inhabited by cheerful natives who repeatedly and without solicitation on my part compared the good times they were now having to the misery and terror which preceded them when the Arabs and Manyema had established themselves in the country as chiefs and slave-traders.

We spent the remainder of the day at Lupánzula's, collecting information from the natives about the okapi, and the next morning started for the dense forest along a native path, very different from the comfortable broad road we had followed hitherto. The path was often a mere tunnel through an oppressive mass of forest, pedestrians being hardly able to stand upright, and the porters therefore finding it most difficult to carry their loads. Occasionally we plunged into deep ravines, where there was a sensation of relief owing to the lifting of leaves and branches to a great height above us. Everything seemed exceedingly sodden and excessively

161. PATH THROUGH CONGO FOREST NEAR LUPÁNZULA'S

green. Fallen tree-trunks had been mined by termites and covered with dank moss. Huge as these prone monsters looked, if one attempted to sit down on them they crumbled into rottenness, and one risked being stung by great blue scorpions lurking in the crumbling wood.*

* Sir Henry Stanley has given in his "Darkest Africa" a fine description of the Semliki Forest: "There were clumps of palms, giant ferns, wild bananas, and tall stately trees all coated with thick green moss from top to root; impenetrable thickets of broad-leaved plants; and beads of moisture everywhere, besides tiny rillets oozing out every few yards from under the matted tangle of vivid green and bedewed undergrowth. It was the best specimen of a tropical conservatory I had ever seen. . . . In every tree-fork and along the great horizontal branches grew the loveliest ferns and lichens, the 'elephant ear' by the dozen, the orchids in close fellowship; and the bright green moss had formed soft circular cushions about them, and on almost every fibre there trembled a clear water-drop."

At last we reached a partial clearing open to the sky. This was an Mbuba village inhabited by tall, not ill-looking negroes, who spoke a language quite distinct from Bantu and not easy to classify. The Mbuba huts were not badly constructed, though very low, and their roofs, formed of leaves of zingiberaceous plants, had but a slight pitch. There was a little ornamented porch in front of every doorway. In spite of the partial clearing which had taken place, the vegetation was so rampant here that it was difficult to obtain a piece of bare ground for the camp. In the vicinity of this forest clearing the butterflies were amazingly beautiful, an exact reproduction of those already described in connection with the

162. IN THE CONGO FOREST, NORTH-WEST OF MBENI: AN MBUBA CLEARING

Toro and Nandi forests. Whilst camping in this place, however, we were rendered miserable by the appalling thunderstorms. Our tents were too near to colossal trees for us to feel comfortable when we heard other monsters of the forest crashing down during the midnight storms, while it was very difficult to keep our beds dry from the rush of water. From this place we plunged farther into the forest till we reached the Dwarfs' homes. All this time we were searching fruitlessly for the okapi, though I believe we were once on its track, for the natives showed me the footprints of a large, cloven-footed animal on the black soil of rotted leaves near a little watercourse. As, however, up to this time I believed the okapi to be an aberrant species of zebra, I turned away impatiently from these footprints, thinking them to be the spoor of a forest eland.

In this village, however, we obtained one or two species of okapi skin which had been cut up by the natives.

One of these Dwarf settlements merits a few words of description. You must imagine that you have penetrated an extremely dense bit of forest, and in a hollow, near a trickling stream, under such a dense canopy of

163. IN THE CONGO FOREST

foliage that the presence of the sky above is only indicated by twinkling stars of blue through the interstices of the leaves, where the great tree-trunks are covered with green moss or lichen due to the damp, there are tiny habitations made of leaves and sticks which it is difficult to believe at first are the dwellings of human beings. These are placed usually in a little clearing between a clump of great tree-trunks. They

are perhaps not more than three feet at their greatest height above the ground, are circular, and have a tiny hole at one side which is used as a doorway. The huts are made by tracing first of all a rough circle with the point of a stick on the cleared ground. All round this circle long withes or twigs are stuck in the ground erect. These sticks are then bent over in a flattened semi-circle to a point on the opposite side of the circle, and thus cross and recross one another, making a kind of low cage of sticks. The large oval leaves of a zingiberaceous plant allied to the bananas or the cannas—very often a species of *Costus* or *Amomum*—are fastened by the ends of their stalks to this network of twigs. The leaves are usually placed in widening circles beginning from the apex of the hut, much as tiles would be put on to a roof, overlapping one another. As this work very often is faulty, quantities of leaves and grass are thrown on to the roof of the hut, and become settled down in time by the impact of the rain into a mass of vegetation from which the water trickles off down the outer side. Here these Dwarfs live in little communities on the outskirts of the settlements of big negroes. Their huts are so difficult to distinguish in the gloom of the forest that the traveller may have Dwarfs living all round his encampment and be unaware of their presence, especially as they manage to conceal their own little bodies so cleverly. When they are on friendly terms, however, with the big black negroes, they have a degree of confidence in these neighbours, especially in certain individuals. If one of their friends goes out into the forest and shouts to them, they will come at his call, even if it be to visit the mysterious and dreaded European. In our own case, of course, we were at once friends with the Dwarfs, as we had brought back to their homes those who had been taken away by the German trader. These returned exiles brought into my camp numbers of their fellows to be photographed and measured.

After several days' residence in this forest we were compelled to abandon any further search for the okapi, and returned to the grass-lands of the Semliki. I do not remember noticing mosquitoes particularly in the forest, but something gave the whole caravan severe malarial fever, and most of my porters were too ill to carry their burdens. The Belgians came to our assistance, providing us with porters and soldiers to carry away our loads to British territory.

The forest between Mbeni and the navigable waters of the Aruwimi appears to be extremely unhealthy. Many Europeans who have attempted to travel through this country have died of blackwater fever, amongst them, I deeply regret to say, that excellent servant of the Congo Free State, Lieutenant Meura, who had done so much in the Upper Ituri District to conciliate the natives and introduce law and order into their forest settlements. With this reservation, however, as regards danger to health, I think

164. A STREAM IN THE FOREST DEPTHS WHERE WE SAW FOOTPRINTS OF THE OKAPI

165. AN AFFLUENT OF THE SEMLIKI, CONGO FOREST

there is no part of Africa more deserving of careful research at the hands of scientific men. I am sure that this north-eastern portion of the Congo Forest contains many strange or little-known mammals, birds, and insects. Besides the okapi (a complete skin and two skulls of which were procured for us by the Manyema soldiers, and despatched to me after my departure by Mr. Karl Eriksson), we obtained the skin of a remarkable new genet-cat. This I took at the time to be a civet, as it was so large as to be almost the size of the big African civet-cat, but it turns out on examination to be a large new species of genet. It was named by Mr. Oldfield Thomas *Genetta*

166. THE SEMLIKI IN THE GRASS-LANDS IMMEDIATELY SOUTH OF LAKE ALBERT NYANZA

victoriæ. This genet was obtained from a very dense part of the forest. In painting my study of this animal I have availed myself in part of the drawing made from the skin by Mr. Smit for the Zoological Society. The background should give some idea of the dense leafage of the forest.

Farther away from the Semliki than we penetrated I am told by the Belgians that the excessive undergrowth which produced such a stifling atmosphere thins away, and the traveller can walk with a reasonable degree of comfort between the mighty trunks of the colossal trees, whose foliage at a height of 200 feet above the ground almost completely shuts out the sky. This is said to be the region more favoured by the okapi than the districts of dense undergrowth. In the depths of these

mysterious forests the natives assert that there are other strange animals besides the okapi. A creature which they described as like a pig, only about six feet long and very stoutly built, may be the little forest-haunting Liberian hippopotamus. There are also stories of a large antelope, with a few white spots or markings, which has very dis-

167. A CHIMPANZEE OF THE CONGO FOREST

proportionately small horns in the male. There is a great deal of talk about a huge, man-like ape, but this apparently is nothing more remarkable than the gorilla. The range of the gorilla extends to within a few days' journey of the Semliki River, and specimens which have been killed by natives and photographed by Belgian officers (the photographs were shown to me) are nothing but gorillas, so far as I can judge. The

THE LARGE GENET OF THE SEMLIKI FOREST (*GENETTA VICTORIÆ*).

hair of some of these gorillas was quite grey on the head and shoulders, no doubt from age. The leopards in this forest are exceedingly dreaded by the natives, and the stories of their man-eating habits are innumerable. They are particularly dangerous to women and children.

The elephant inhabits these forests in large numbers, but he appears to frequent with equal relish the savannahs and open grassy plains of the Semliki River and of Busongora, at the south end of Ruwenzori. On our return journey through the Congo Forest we halted at the edge of a

168. YOUNG MALE ELEPHANT KILLED IN RUAHARA GORGE.

picturesque gorge of the Ruahara River. This is a small stream which has in course of time widened for itself a profound gorge in the plain of Busongora that would be large enough for a Hudson and deep enough for a Colorado. Gazing across this gorge one evening, we saw an immense herd of elephants coming toward us, seeming in the distance very black in colour against the pale straw-yellow of the dry, short grass of the plains, but with white gleaming tusks, each elephant looking extraordinarily like the Eastern carvings of black ebony elephants with ivory tusks that are to be seen in every Chinese and Japanese collection. When they reached the precipitous descent to the Ruahara gorge, I

thought to see them turn back, but with great ease they slid and scrambled down the steep sides, rushing with shrill trumpetings to the reed beds which marked the invisible watercourse. We shot two males out of this great herd, having permission to do so from the Congo Free State authorities. When the first rifle shots rang out, it was a touching sight to see the baby elephants run to their mothers (it was one of those large mixed herds that one so often sees, with females and young accompanied by young full-grown males*), and the mother separate her front legs as widely as possible to receive the little one under the protection of her body, ceasing her fierce trumpetings every few minutes to caress the frightened little one with her trunk. After the shots which laid low these two young males, the frightened animals in their panic tore up and down the gorge through the dense vegetation, not, however, attempting to charge us, though at one time it seemed as though they would run amuck through the camp.

* These breeding males appear to be quite young (for elephants—say twenty to thirty years old), with relatively small—fifty-pound—tusks.

UGANDA PROTECTORATE

OROGRAPHICAL FEATURES AND SALUBRITY.

PLATE II

Donyiro
Thorn Bush Plain
Table Topped Peak
Naita M.
Mt. Tiwano
RUDOLF PROVINCE
DABOSSA
Lotoke Mts
TURKANA
Lake Stefanie
LAKE RUDOLF
Mt. Lubar
Lubar Mts
Tetti H.
Sukann H.
Kaguelas Hills
Mt. Kulal
Kulal I.
TURKWEL
Elgono Hills
Amotile H.
Trein H.
Andore Vol.
Mt. Nyiro
Ikata H.
Alangai H.
Lake Sugota
Latemk H.
Mosol H.
Mazeroi
Martinasor
Yiatu Hills
Debes
Kobali
Gumut
Kurisawin Hills
Sogiani Hills
Kacwai Hills
Lake Baringo
BARINGO
L. Hannington
Kamasia
Elgeyo Escarpment
Kerio R.
Lake Rudolf
Ferguson's Gulf
Lake Rudolf
Ashe Hill
Suwa
Sosian
Nairobi
Kikuyu Escarpment
Nairasha
NAIVASHA
Longonot
M. Kinangop
Aberdare Mts
Nakuru
Mau Escarpment
Forest
Lumbwa
Kisumu
Port Florence
Kavirondo B.
Ugada
Nandi Escarpment
Nandi Sta.
Eldama Ravine
Kipkaren Falls
Mt. Londiani
Kosova Hills
Kuja R.
Kuja
Mara
Mara R.
Suhuen Lattil
Suhuen Erak
Debo B.
Shirati B.
Mori B.
Mara
Mazinga
Bukora
Kagenda
SESE
Buganda
Sewaia
Mt. Stanley
Semaliki
Buganda
Mitiana
Wamala
Buvuma
Bisa
Kampala
Mengo
Ngogwe
Entebbe
Jinja
Mt. Throston
Mumias
Kisumu
Port Florence
Kavirondo B.
Ugada
Nandi Escarpment
Nandi Sta.
Eldama Ravine
Kipkaren Falls
Mt. Londiani
Mt. Kinangop
Aberdare Mts
Nairobi
Kikuyu Escarpment
Lake Hill
Nairasha
NAIVASHA
Longonot
Suwa
Sosian
Suhuen Erak
Debo B.
Mara
Mara R.
Shirati B.
Mori B.

CHAPTER VII

HISTORY OF THE PROTECTORATE TERRITORIES

ON certain ancient village sites in Northern Kavirondo—namely, in that country which lies between Mount Elgon and the Victoria Nyanza—there are found in the surface soil curious blue beads and large pear-shaped ear-rings of jasper and chalcedony. The blue bead is a dull, opaque, crystalline substance, deriving its turquoise colour, no doubt, from some infusion of copper. The beads are pierced with large holes, the chalcedony or jasper ear-drops with a finely drilled hole. The Ja-luo, or Nilotic Kavirondo, wear these beads and ear-drops, and attach very great value to them. They are believed to come from the far north-west. Mr. Hobley, who first discovered the peculiar nature of these ornaments, and the fact that they differed widely from the glass beads of commerce, is of opinion that they came from Nubia or Upper Egypt. These beads, and the custom of building clay walls with arched doorways round the villages,* may possibly indicate that in ancient times representatives of a superior, not wholly negro, race may have come down from the north, and have dwelt as traders, miners, or settlers in these countries to the south of Mount Elgon. We know by the Egyptian paintings and bas-reliefs that they had sufficient trading intercourse with the countries of the Upper Nile and the Western Sudan (as distinguished from Somaliland or the Land of Punt) to have derived thence specimens of the Congo

109. BLUE BEADS IN A JA-LUO'S EAR (KAVIRONDO)

* Though this is more characteristic of the Bantu Kavirondo and of the Elgonyi (Nandi), than of the Ja-luo.

Pygmies (who, according to the traditions of the negroes on the Congo watershed, formerly dwelt in large numbers in the Bahr-al-Ghazal forests), chimpanzees, and perhaps certain monkeys. It would indeed be surprising if the powerful dynasties which arose in Egypt and Nubia from time to time during something like 4,000 years had made no attempt to increase the commerce of their country in the direction of the Black Man's Country. From Khartum the Egyptian boats might so easily have ascended the Nile, assuming that river to be free of sudd, to the precincts of what is now the Uganda Protectorate. Or from the same region above Khartum there was probably no hostility on the part of the timid, badly armed natives to prevent the Egyptian and Nubian traders advancing overland with their caravans in the direction of Mount Elgon.

But whether Egyptian commerce or Egyptian rule did or did not have any direct contact with these countries at the sources of the Nile, the influence of Egyptian civilisation profoundly affected Negro Africa. With the exception of the few cultivated plants and domestic animals which tropical Africa has received from Brazil through the Portuguese, or which have been landed on its east coast from India by Asiatic traders, all the remaining domestic animals and cultivated plants known to the Negro have reached him by way of Egypt. From Egypt also came ideas for the making of planked canoes, such as those used by natives of Uganda, and the designs for musical instruments of a more complicated nature than the drum, the antelope-horn trumpet, or the bowstring. The Uganda harps are exactly like those depicted on the Egyptian monuments. Is it possible that some of the "Bahima" (the aristocracy of Hamitic type prevalent in Western Uganda, Unyoro, Toro, Ankole, part of the adjoining Congo Free State, and the countries on the south-east of the Victoria Nyanza and towards the north and east of Tanganyika) are the descendants of traders from Ethiopia, who came to these countries many centuries ago? The Bahima have completely forgotten any Hamitic language that they may have once spoken. They speak now, with a marked accent of their own, the Bantu language of the country where they dominate as an aristocracy or where they serve as proud cattle-keepers. The Bahima must have mingled in ancient times—possibly they mingle still to some extent—with the surrounding Negroes, from whom they have derived their closer, woollier hair, and, in some individuals, their darker colour. But one notices amongst them again and again a type of face startlingly Egyptian in its main features, and sometimes not much darker in complexion.

Tradition amongst the natives does not enable us to fix even approximately the date at which the countries round the Nile sources began to be invaded by a superior race of Hamitic features coming, presumably, from

170. A MUHIMA

the north-east. As far as any remembrance of their origin exists amongst the elders of the Bahima, they repeat a vague tradition to the effect that their far-off ancestors once were driven from their original country by a severe famine, and on subsequent occasions by internecine wars. They advanced by degrees to the Lango or Bukedi country and the east bank of the Victoria Nile. Here they halted for a long time; then they appear to have crossed the Nile and entered Unyoro, first in small, and by degrees in large, numbers. At the present time there is no trace of the pure-blooded Bahima to be found north and east of the Victoria Nile, but the Latuka, Turkana, Sūk, Nandi, and Masai peoples all bear traces of having mingled in times past to a greater or less degree with a people of Gala stock, from whom they borrowed words for numerals, and with whom they interbred. These Bahima were great herdsmen. They brought with them from their northern home a breed of cattle of their own. These cattle, remarkable for their large size, straight backs, and enormous horns, agree remarkably closely with the long-horned cattle depicted in the Egyptian frescoes.

The Bahima, acccording to native legends, appear to have founded dynasties of kings in Unyoro, Uganda, Ankole, Karagwe, and other countries to the south. They were possibly the means also by which musical instruments of Egyptian shapes, and perhaps other Egyptian "notions," were introduced into the countries round about Uganda. Personally, I believe that this invasion of the Hamite was not confined to the countries of the Uganda Protectorate and of adjoining German East Africa only. I think the Hamite from these regions of the Upper Nile spread his blood due west, affecting and improving the bodily structure and culture of many of the Negro stocks found there at the present day, such as the Makarka, or Nyam-Nyam. This western invasion of Hamitic blood coming from Egypt may have even penetrated as far as the countries between the Benue and the Cross River.*

Another considerable invasion of Caucasian blood came straight from the western Sahara Desert to Senegal and the countries in the basin of the Niger. In Senegambia arose that half-breed between the Lybian and the Negro, the celebrated Fulah stock; and the Fulahs, or Fulbe, spread by conquest almost to Central Africa, to the vicinity of Lake Chad, and to the regions at the back of the Cameroons, bringing a counter-strain of Caucasian blood into regions which were just touched by the infiltration from the Upper Nile. Then, again, one seems to trace this "Hamitic" improvement of the Negro physiognomy down the east and west coasts of Tanganyika. On the west coast of that lake and in Manyema, though the people may have perfectly black skins and woolly hair, they often exhibit thin lips, a straight nose, and a European cast of features. The Zulu tribes who

* Where I have seen very Hamitic-looking types.

invaded the South African peninsula, and brought so much of it under the dominion of the Bantu-speaking Negro, seem to have been a relatively recent addition to the races of South Africa, and to have rushed down from the more central parts of the continent with a rapidity only less than that with which they rushed back again in a counter-raid during the early years of the nineteenth century—a raid which brought Bantu-speaking natives from Zululand to within hail of the Victoria Nyanza. The original Zulu raiders seem to have come from somewhere in the direction of Tanganyika, and to have been a people which had received at that time an admixture of this Hima stock from the direction of Uganda.

171. A HIMA OX

Under the Ptolemies and the Greek administration of Egypt nothing seems to have been done to open up communication with Negro Nileland. Some time after the Roman conquest of Egypt, the Emperor Nero sent explorers to discover the source of the Nile, and they appear to have travelled south up the course of the White Nile until they were stopped by the sudd. They may possibly have reached as far south as the vicinity of Lado, though to my thinking it is doubtful whether they got much beyond the junction of the White Nile and the Bahr-al-Ghazal. Nothing was done in this direction by the Byzantine Empire, nor did the Muhammadan rulers of Egypt for something like 1,100 years make any attempt to extend their power or enlarge their knowledge in the direction of the Upper Nile. All this time the infusion of Gala or Hamitic blood into the races of Uganda (which consisted mainly of the ordinary black Negro stock grafted on to a preceding dwarfish race like the Congo Pygmies) was building up dynasties

and kingdoms which in comparison with most Negro states were powerful, well organised, and endowed with some degree of indigenous civilisation, raising the peoples of Uganda, Unyoro, and the countries of the west coast of the Victoria Nyanza to a position of comfort and refinement a good deal superior to the life led by the naked folk to the east and north of that lake, many of whom were still leading an existence no higher in culture than that of predatory carnivorous man in the lowest Stone Age.

So far as tradition goes, the Bahima of Ankole can trace the genealogy of their kings for about 300 years back. The Baganda can recall their kings of a period as far distant as the fifteenth century. The genealogy of the Uganda sovereigns includes thirty-six names (prior to the present king); and if the greater part of the earlier names are not myths, this genealogy, reckoning an average fifteen years' reign to each monarch, would take us back to the middle of the fourteenth century. These genealogies and legends will be treated of further in Chapters XV. and XVI. Assuming that they are to be reduced because they contain repetitions or imaginary or concurrent names, one is still entitled to assume that Uganda, Unyoro, and perhaps Ankole and Karagwe to the south, have been settled kingdoms under dynasties of Hamitic (Gala?) origin for 500 years.

Though the Uganda dynasty, no doubt, belongs in its origin to this Hima stock, which is Hamitic and of the same race from which most of the earlier inhabitants of Egypt proceeded, nevertheless, as for several hundred years it has married negro women of the indigenous race, its modern representatives are merely negroes, with larger, clearer eyes, and slightly paler skins. When these kingdoms on the Victoria and Albert Nyanzas flourished, their utmost knowledge of the outer world seems to have been a vague, a very vague, perception that there was an Abyssinia, or a country to the north-east, which was a powerful kingdom inhabited by people of palish complexion; while in other directions their geography was bounded by the marshes of the Nile, the Congo Forest, Tanganyika, the steppes of Ugogo and Masailand, the cold Plateau of Nandi, and the mass of Mount Elgon.

Muhammad Ali, the first great Viceroy of Egypt, extended Egyptian rule to Khartum, and under his impulse the Nubian merchants began to explore the Upper Nile and the Bahr-al-Ghazal for slaves and ivory; but no word of the powerful kingdoms of Uganda and Unyoro reached Europe through the explorations of the White Nile which followed on the action of Muhammad Ali. The spread of guns and gunpowder, the replacement of Portuguese rule by Arab conquest on the east coast of Africa, and the immense impulse given to trade with East Africa by the firm establishment of the British Empire in India (one result of which was the enormous increase of seaborne trade between India and Zanzibar),

were all motives which prompted the Maskat Arabs who had acquired the sovereignty of the East African coast from Somaliland to Moçambique

172. A MASKAT ARAB TRADER IN UGANDA

to explore the unknown interior, especially in the direction of a land known as Unyamwezi, or the Land of the Moon. During the first forty

years of the nineteenth century Zanzibar Arabs advanced little by little towards the interior behind the Zanzibar coast. They discovered Lake Nyasa, and they heard rumours of the Victoria Nyanza and of Tanganyika. During the 'forties of the last century they became firmly established as traders in Unyamwezi, and having hitherto treated the natives well (except that they purchased slaves from chiefs ready to sell—a transaction which made no bad impression at all on the negroes), they met with few or no obstacles in penetrating farther still into the interior in search of trade. Reaching the shores of the Victoria Nyanza, they heard rumours of powerful kingdoms to the north and west of that lake.

On the other hand, the alert Hima aristocracy in Karagwe and Uganda was beginning to hear of these men with beards and light complexions who were coming to trade with the south end of the great lake. Arab traders were invited to the court of Suwarora, the Hima king of Karagwe (south-west coast of Victoria Nyanza), and especially to that of his gentle-natured successor, Rumanika. The first non-Negro from the outer world to penetrate into Uganda was a Baluch soldier from Zanzibar, named Isa or Isau bin Hussein, who fled from his creditors, first to the Arab trading settlements in Unyamwezi, then to Karagwe, and finally to the court of Suna, king of Uganda, where he must have arrived about 1849-1850. His handsome face and abundant hair and beard won him royal favour. Known as "Muzagaya" ("The Hairy One"), he became a power in Uganda until Suna's death in 1857, and possessed a harim of 300 women. Through Isa the Baluch, the king of Uganda and his nobles and people first heard of a world of Arabs and white men beyond Masailand, Unyoro, and Tanganyika. Suna sent word to the Arab traders in Karagwe inviting them to his court. Sheikh Snay bin Amir al Harisi was the first to accept. In 1852 this Arab trader stood in the presence of the most powerful king of the best organised African state then existing, untouched by Arab or European influence. Snay bin Amir remained some time with Suna, gave him much information about the world outside the Victoria Nyanza, and even beyond the coast of Africa. From him Suna and the Baganda had confirmation of the stories of Isa. They learnt that there really were white men.

The Bahima who had formed the aristocracies and dynasties of these regions remembered in their traditions a time when they were of much lighter complexion and of longer hair than they had become since their secular mingling with the negresses of the subject races. They were much struck by these stories of white men existing somewhere beyond the Nile, and regarded them as the stock from which they themselves had sprung. They therefore manifested a certain fear lest the white men from the lands of their forefathers might be coming to conquer these fertile

countries from the grasp of their blackened descendants. Snay bin Amir, returning to Unyamwezi, brought back with him full accounts of this organised and civilised Negro kingdom to the north. This news spread rapidly amongst the trading Arabs of the Zanzibar hinterland, and came to

173. AN ARAB TRADER IN UGANDA

the ears of the German missionary Krapf, and to Rebmann, his colleague. (These two had already discovered the snow-mountains of Kilimanjaro and Kenya, and were doing much to bring to our knowledge the names and the features of inner East Africa.) If Krapf did not first mention the name "Uganda," then that revelation falls to Captain (afterwards Sir Richard) Burton. The discovery of these snow-mountains, and the stories of great lakes which were told by Krapf and Rebmann, were the indirect

cause of Captain Burton's expedition being sent to discover Tanganyika. On Burton's return from Tanganyika to Kaze and Tabora in Unyamwezi, he gathered up and communicated to the Royal Geographical Society all the information he could collect about Uganda, Unyoro, and the Hima kingdoms at the sources of the Nile.

About 1857 the first Arab caravans trading inland from Mombasa crossed the Masai and Nandi countries and stopped in Kavirondo waiting for permission to enter Uganda. This was politely refused, on the grounds that Suna was dead, and his successor, Mutesa, not properly installed.

Burton, returning to Unyamwezi from Tanganyika, was ill and weary after his fatiguing explorations. He heard from the Arabs about the existence of the great Nyanza and Uganda, but did not feel inclined to face the bother and risk of another exploring journey to the north. So he reluctantly acceded to the pleadings of his companion Speke, and allowed the latter with a very poorly equipped expedition to travel with Arabs or Wanyamwezi in the direction of the Victoria Nyanza. Thus Speke discovered and named that great lake, and his discovery, combined with the information he and his companion had received from the Arabs, convinced Speke (but not Burton) that the main source of the Nile had at last been found. Burton seems to have been so snappish to the enthusiastic Speke when the latter returned from his discovery of the Victoria Nyanza, that Speke kept his enthusiasm henceforth to himself, and took advantage of Burton's own desire to remain for some time at Zanzibar to hurry to England and lay the facts of his discovery before the Royal Geographical Society. No doubt, being human, he at the same time poured forth his grievances against Burton, who certainly seems during all this Tanganyika expedition to have been over cautious about running risks, and easily cast down by difficulties and fatigue. Owing to an exaggerated scare about the Masai, which Speke was quite willing to have brushed aside, Burton had forced Speke to give up the idea of visiting first of all (which they could very well have done) the snow-mountain of Kilimanjaro. Undoubtedly but for Burton's fretfulness and exaggerated apprehension of hostility from the natives, the expedition might either have added Lake Nyasa or the Victoria and Albert Nyanzas to the list of its discoveries. The most difficult part of the journey certainly was the route to Tanganyika.*

Speke, having the late Colonel Grant with him as an associate, returned to East Africa and journeyed with no great difficulty through Unyamwezi

* It is curious, but true, that if Speke's advice had been followed, and Burton's cautiousness had been less, they could have joined with Arab caravans in 1857 to march direct on the Victoria Nyanza *viâ* Kilimanjaro, and thus have forestalled Joseph Thomson by twenty-seven years.

and Karagwe round the western coast-lands of the Victoria Nyanza to Uganda, and reached that country in 1862. Suna was dead, and his son, the young king, Mutesa, had been five years on the throne. He received Speke with great hospitality, interested himself in the object of the mission, which was the discovery of the Nile sources, and sent Speke and Grant to Bugungu to see the Nile issuing out of the Victoria Nyanza Lake in its birth at the Ripon Falls (as the cascades of Jinja were named by Speke). Trusting implicitly to native assurances that the river thus tearing away to the north-west from the Victoria Nyanza was the Nile of which they were in search (and the assumption turned out to be right, though at the time Speke could not say he had proved the fact with certainty), Speke and Grant decided to strike for the Nile where it joined with the Kafu River (a mere swamp) in Unyoro. The expedition followed the Victoria Nile north-west to the Karuma Falls.

Curiously enough, Speke seems to have displayed no curiosity about the Luta Nzige,* or Albert Nyanza, of the existence of which he learnt something from the natives. He knew, at the time, nothing of Mr. (afterwards Sir Samuel) Baker's plucky expedition to come to his relief, therefore he could not be leaving this important section of the Nile sources for another explorer to visit. Throughout his journey he seems to have taken a great deal for granted, though it must be admitted that subsequent discoveries have shown the truth of these assumptions. But these assumptions, nevertheless, were based on so little actual evidence for some years after Speke's return, that they gave his rival—and, I am afraid it must be admitted, enemy—Burton an opportunity to subject Speke's theories to a destructive criticism, a criticism which gradually reduced the Victoria Nyanza to an unwholesome marsh containing a few open pools, and lent strength to Livingstone's wild theory of the ultimate source of the Nile being in Lake Bangweolo and the Luapula River. Mr. Baker, with his plucky wife (who is still with us, and well and strong enough to pay a visit some day by the Uganda Railway to her old domain), met the explorers Speke and Grant at Gondokoro, and learnt from them about the possible other lake of the Nile sources, Luta Nzige. Baker went on with his wife and discovered this lake, which he named the Albert Nyanza, a feat for which he was knighted by Her late Majesty. (In somewhat unfortunate contrast to this well-deserved honour bestowed on Sir Samuel Baker, Captain Speke received no reward from the British Government, and only several years afterwards did his companion

* The most common local Bantu name for Lake Albert (and Albert Edward) is Dueru or Lueru. Luta Nzige means "It" (the Lueru—*i.e.*, a sheet of brightness) "kills locusts," because the locust swarms when attempting to cross these lakes fall (from fatigue) into the water in myriads.

Grant obtain a C.B., and that, I believe, was in recognition of some comparatively inconspicuous services which he rendered in connection with the Abyssinian Expedition.)

After Muhammad Ali's conquest of the Egyptian Sudan and the foundation of Khartum as its capital, the Austrian Government had interested itself to some degree in the territories which might lie in that direction as fields for European commerce and even colonisation. To acquire information about the country it had encouraged, and to some extent subsidised, the establishment of an Austrian Roman Catholic mission which should carry on a propaganda among the Nile Negroes, with stations at Khartum and various places higher up the Nile. During the 'fifties these missionaries had penetrated as far south as Gondokoro, which is now the frontier post of the Uganda Protectorate. Petherick, an enterprising Briton, had started an ivory-trading establishment at Khartum, and in his sailing vessels had penetrated up the Bahr-al-Ghazal, and up the White Nile as far as Gondokoro. An Italian traveller, Miani, had even at this time gone beyond, and reported a story of the Nubian slave-traders to the effect that there was a great river flowing westwards to the south of the Nile watershed.

Petherick first brought to our notice the whale-headed stork; and the ivory-traders, whom he supplied with guns and ammunition to range far and wide and shoot elephants, brought back from the Acholi people far to the south of Gondokoro the story of womanish races addicted to the keeping of pet dogs who dwelt beyond the naked Nile negroes. (It was supposed by Speke that the Bantu races of Unyoro and Uganda were alluded to as womanish because of their habit of scrupulously clothing themselves in long garments of bark-cloth in contradistinction to the Acholi, who consider it unmanly to drape male nudity. The Baganda until recent years prized the domestic dog highly as a pet). It was the rapids of the Nile beyond Gondokoro which, at the time of Baker, stopped European exploration at that point. A Maltese ivory-trader named Debono, however, penetrated to the south of the Nile rapids, and was the first European (though an illiterate one) to reach the inner Bari and Latuka countries east of the Nile, within the present Nile Province of the Uganda Protectorate.

Sir Samuel Baker and his wife discovered the Albert Nyanza, which they believed to be of very much greater length than it really is, deceived in this respect by the strongly marked indications to the south of the Albertine Rift Valley. The plain of the Semliki, lying between the Bulega* heights on the west and the cloud-capped Ruwenzori range on the east, appeared to them in its blue distance to be an indefinite

* In Negro languages there is often little distinction between "l" and "r," "d" and "l"; this root is indifferently pronounced "-lĕga" or "-rĕga."

continuation of Lake Albert to the south-west, while the stories which reached them about Lake Albert Edward strengthened this conviction of the existence of a very lengthy "slug-like" lake in Central Africa, which extended from the confluence of the Victoria and Albert Niles towards the great river which Livingstone was beginning to discover west of Tanganyika, which river afterwards turned out to be the Upper Congo. Persistent clouds, and perhaps a difficulty of understanding the natives, prevented Sir Samuel Baker from guessing that his "Blue Mountains" were probably the highest range in all Africa, and contained thirty miles of snow and glaciers.

Baker afterwards returned to the Egyptian Sudan as its Governor-General, and again visited these regions of the Upper Nile, discovering a portion of that chain of swamp lakes nowadays known under the names of Kioga, Kwania, etc. On Baker's visit for the discovery of the Albert Nyanza, he and his wife had been held captive and very nearly killed by the king of Unyoro (Kamurasi); and Kamurasi's successor, Kabarega, proved himself quite as inimical in subsequent years, and prevented Baker from continuing his researches in the direction of Uganda. Sir Samuel Baker was succeeded in his post at Khartum by the late General Gordon, and General Gordon despatched two or more of his cosmopolitan white assistants—Belgians and Americans—to spy out the land in Uganda.

Arab intercourse with Uganda had somewhat diminished since the time of Speke's visit. King Mutesa, though in a way searching for a religion better than the inane worship of ancestral, earth, air, or water spirits, had considered Muhammadanism, but had rejected it, some say because he objected to the rite of circumcision, others because he vaguely felt the danger of its political propaganda, believing that if he and his people became Muhammadans they would fall inevitably under the power of "the Turk" (the Egyptian rule in the Sudan in those days was always referred to as the rule of the Turks). Less and less began to be heard about Uganda and the Victoria Nyanza from Zanzibar. Burton's criticisms of Speke's discoveries had shaken the faith of many geographical experts in their validity. Livingstone's mistaken impression that his last discoveries had placed the sources of the Nile where he had really discovered the main springs of the Congo led the interest of African exploration rather more towards Lakes Nyasa and Tanganyika. A young Welshman domiciled in America, and become the travelling representative of a great American journal—Henry Morton Stanley—had succeeded in a very complete and remarkable manner in finding Dr. Livingstone on the shores of Tanganyika, and relieving him at a time when he was worn out with penury, misfortunes, and ill-health.

Stanley returned to Europe, to learn soon afterwards that the man whom

he had relieved had with sublime obstinacy returned to his exploration of the supposed Nile sources, only to die of dysentery on Lake Bangweolo. The unsolved problem of the Congo-Nile—the doubts which had been thrown on the existence of the Victoria Nyanza as a vast and single lake—were excellent motives which prompted the *New York Herald* and the *Daily Telegraph* to join forces and to provide the funds for an expedition which should enable Stanley to solve these problems. And Stanley did solve them. Journeying to the Victoria Nyanza by Speke's old route through Unyamwezi, he put together a boat on the waters of that lake and completely circumnavigated the Victoria Nyanza, showing conclusively for the first time that it was the vastest inland sea of Africa, and perhaps the second greatest fresh-water lake in the world. Although in his hurried survey of the lake shore Stanley made some mistakes (mistakes which clung obstinately for years to the map), he nevertheless gave us the first approximately correct outline of the Victoria Nyanza, and indicated the existence of its principal islands and archipelagoes. (On his subsequent expedition to relieve Emin Pasha he himself corrected his original survey of the west coast, and added the large south-western gulf to the waters of the lake.)

In 1875 Stanley and his large expedition reached Uganda, to be received by the same Mutesa who had received Speke. Mutesa was again puzzled about religious matters. Stanley's conversations inclined him favourably towards Christianity. At this opportune moment there arrived in Uganda one of Gordon's messengers, or (if one may say so without unpleasantness) spies—Linant de Bellefonds, a Belgian, who in reality had come to see whether Uganda was worth the conquering, and whether it was too tough a job to tackle. Stanley resolved to write his famous letter to the *Daily Telegraph* inviting English missionaries to proceed to the evangelisation of Uganda. He had no means of sending this letter back to Europe save by way of the Nile, and Linant de Bellefonds volunteered to take it. As the unfortunate Belgian was travelling down the Nile through the Bari country in the vicinity of Gondokoro, his expedition was attacked by the Bari, who had suffered recently great wrongs at the hands of the Nubian slave-traders. Linant de Bellefonds was murdered by the Bari, and his corpse was thrown on the bank, to lie there rotting under the sun. A Government expedition sent to inquire into the cause of this attack and to punish the Bari recovered Linant de Bellefonds' body, and removed therefrom the long knee-boots which he was wearing at the time of his death. In one of the boots—he had tucked it between boot and leg at the time of the attack—was found Stanley's famous letter to the missionaries. This was sent on to Gordon Pasha at Khartum, and forwarded by him to the *Daily Telegraph* with an explanation of the circumstances under which it had been found. The letter, when published, met with an immediate

response. Before many months were over (perhaps less than a year after Stanley had issued the appeal from far Uganda), the first party of Anglican missionaries of the Church Missionary Society had started in two sections for Uganda. One-half went by way of Zanzibar and Unyamwezi, the other went up the Nile. Both met in Uganda, and the establishments of the Church Missionary Society, which were destined after extraordinary vicissitudes to result in an immensely successful propaganda, commenced in 1877 their work in Uganda. Truly Stanley's letter, the blood-stained sheet of paper found in the boot of the murdered de Bellefonds, was big with fateful results for the Kingdom of Uganda.

The excitement caused by this bold step on the part of the Anglican propaganda roused attention at Rome, or rather struck the imagination and intelligence of a remarkable prelate of the Roman Church—Bishop (afterwards Cardinal) Lavigerie, who, as Bishop of Algiers, had founded the Mission of the White Fathers, a body of ardent missionaries who were to imitate the Arabs in their dress, to lead in many respects an Arab life, and thus to convert Northern Africa and the inhabitants of the Sahara to the Christian faith. The views of Cardinal Lavigerie were, perhaps, consciously or unconsciously, as much political as religious, and he yearned to acquire fresh territory, not only for his Church, but for his own nation, France. Resolved that the British missionaries should not have it all their own way in Central Africa, he despatched his White Fathers to the Victoria Nyanza and Uganda on the one hand, to the Zanzibar coast and Tanganyika on the other. On Tanganyika the White Fathers have done a really great work in making their missions points of refuge for the slaver-raided natives, in introducing the elementary arts and industries of civilised life, and in conferring such benefits on the local agriculture as the introduction of wheat and European vegetables. In Uganda, unfortunately, they came into rivalry, both religious and political, with the Anglican missionaries who had been first established there, and this struggle for ascendancy between representatives of two branches of the Christian faith perplexed and irritated the weary and fickle Mutesa, who in his last days was often heard to regret that he had invited any missionaries at all to his country.

After Stanley's departure from Uganda and the death of Linant de Bellefonds, General Gordon's Government again began to interest itself in the question of Uganda. Indeed, about this time the Government of the Egyptian Sudan, during the last years of Ismail Pasha's reign over Egypt, became strangely ambitious. It had annexed the greater part of Somaliland; it had annexed, but failed to maintain the annexation of, Abyssinia; and its fleet, under a Scotchman, McGillop Pasha, had steamed down the east coast of Africa and had attempted to seize the mainland ports,

Mombasa included, of the Sultan of Zanzibar. Sir John Kirk was then the British representative at the court of the Zanzibar "sayyid," or sultan. He was hoping to see the growth of a large, prosperous, and well-governed Arab state over East Africa between Somaliland on the north and the Portuguese possessions on the south, and inland as far as the great lakes. This state, he hoped, would eventually come under a sufficiency of British protection or control to prevent the intermeddling of other European powers, and to secure an unhampered field for British commerce. Mutesa had heard from the English missionaries of Sir John Kirk, and had commenced a correspondence with him. Sir John Kirk had intervened to send away the fleet of McGillop Pasha, and had prevented the Egyptian Government from laying hold of the Sultan of Zanzibar's possessions south of Somaliland. He now made a certain intervention on behalf of Uganda, and his representations through the British Foreign Office restrained General Gordon from establishing the Egyptian power south of the Victoria Nile.

In 1884 Mutesa died, and was succeeded by his son Mwanga. Mwanga was a youth of very vicious tastes, and introduced practices into his court of an indescribable nature, only to be alluded to in Latin phrases which might be borrowed from the works of Suetonius. He very soon came into collision with Christianity. Both the Anglican and Roman converts steadily refused to join in his orgies. Several cruel executions followed, and the persecution of both Christians and Muhammadans became so vehement that, despite the almost religious reverence which was paid to the sacred person of the king in Uganda, a strong feeling grew up for the deposition of Mwanga. King Mutesa during his later years had been less afraid of Muhammadanism, and had decidedly acquiesced in the settlement of Arabs in his country both as traders and religious teachers. His half-brother Mbogo had become a Muhammadan,* and numbers of other Baganda had been converted to Islam. Many of these people, in fact, had travelled to the coast, returning with Arab caravans, and had joined the Muhammadan faith at Zanzibar.

In the late 'seventies a great revival of Arab enterprise had taken place, firstly in matters of commerce, and secondly not unconnected with a desire to establish an Arab rule over the countries of inner Africa. Arab† caravans had pushed boldly inland from the Mombasa coast, feeling their way along the direct route to the Victoria Nyanza. In this way

* Mbogo was once for a brief time made king over Uganda. He has always been a loyal adherent of the British Government, is now regarded as the official head of the Muhammadans in Uganda, and receives a yearly pension.

† When I say "Arab" in dealing with periods since 1850, I must be taken to include black men with only a proportion of Arab blood in their veins, as well as pale-complexioned, long-bearded Arabs from Southern and Eastern Arabia.

information reached the missionaries established at Mombasa during the 'seventies of the existence of a Nilotic Negro language in Kavirondo, on the

174. A SWAHILI (ZANZIBARI) TRADER IN UGANDA

north-east coast of the Victoria Nyanza. News began to arrive of the Nandi people,* and of the Rift Valley with its salt- and fresh-water lakes. All

* The word "Nandi" first appears on the map of Stanley's "Through the Dark Continent" in 1878.

this information, gathered up and intelligently commented on by the geographer, E. G. Ravenstein, brought about the despatch of the Royal Geographical Society's celebrated expedition under Joseph Thomson, to which I shall allude later on.

Meantime, this steady increase of Muhammadanism had brought to Mwanga's court an ally to Christian influence. In the presence, not only of mere heathenry, but of a soul-and-body-destroying debauchery which was rapidly spreading under Mwanga's influence, the "Peoples of the Book" or "of the Religion (Dīn)" (as they styled themselves)—namely, the adherents of the Christian missions and the Muhammadan propagandists (who had this common ground of belief, in that they derived their faith from two different versions of the Hebrew Scriptures)—united their protests against Mwanga's senseless cruelties and filthy practices. Mwanga thought to abolish the principal of his critics, both Christian and Muhammadan, by inviting those chiefs and officials who had dared to reason with him to proceed on a warlike expedition against the Bavuma. His idea was to land them on an inaccessible island, take away all the canoes, and leave them to starve to death there. Scenting his plot, the leaders of the religious party resolved to strike for life and freedom, and possibly depose the king. The cowardly Mwanga became panic-stricken and escaped, every facility being given him to get away. He fled in canoes to the south end of the lake, where eventually he took refuge at a mission station of the White Fathers. He shortly afterwards declared himself a Roman Catholic.

After this bloodless revolution, however, the temporary alliance between the Christians and Muhammadans was dissolved, and the Muhammadans got the upper hand. The Christians and the Muhammadans had managed before Mwanga fled to secure the person of the eldest amongst his brothers, Kiwewa, a man much older than Mwanga, who had been debarred from succeeding to the throne on Mutesa's death by the Uganda superstition that a dead king should be succeeded by one of his younger, not one of his elder sons. After the revolution the Muhammadans attempted to force on Kiwewa the rite of circumcision. Kiwewa, however, steadily refused, and when it was attempted to impose this rite on him against his will he turned on the high functionaries of his kingdom who were Muhammadans and had come to his enclosure for this purpose, and killed several of them. His palace was then attacked by the Muhammadans, and Kiwewa fled. His younger brother, Kalema, was circumcised by the Muhammadans and placed on the throne as an avowedly Muhammadan king. Kiwewa was eventually captured and put to death. Many princes and princesses of royal blood were burnt. The Christian missionaries were expelled from the country, and large numbers of their converts left in dismay for Ankole and the south end of the Victoria Nyanza.

In the worst days of his persecutions of the Christians Mwanga had frequently threatened Catholic and Protestant missionaries with murder, though he always denied his threats when faced with them. The truth is that he was suffering from a state of nervous trepidation owing to the belief that some European State would annex his kingdom. As the result of the interesting reports sent home by such missionaries as Mr. Wakefield, of Jomvu, near Mombasa, the Royal Geographical Society had, as I have already stated, sent out an expedition under Joseph Thomson to discover the shortest and most direct route from the Indian Ocean to the Victoria Nyanza. Dr. Fischer, a well-known German explorer, had already reached the Rift Valley and discovered Lake Naivasha. The great obstacle to the using of this route was the supposed ferocity of the Masai. The real explanation of this was (apart from the Masai raids for cattle, which brought them sometimes to the vicinity of Mombasa) that the Swahili caravans traversing this part of East Africa never hesitated to plunder the natives when they thought themselves strong enough. They had received several well-merited and drastic punishments at the hands of the Masai for these attempts to rob and rape, therefore they had circulated reports about Masai ferocity, which for a long time caused Europeans to regard this lordly tribe with a quite exaggerated dread.

Joseph Thomson, however, managed to get through the Masai country with little difficulty. He was obliged to some extent to follow where led by the Swahili traders, and as the latter had a wholesome fear of the Nandi and Lumbwa tribes which intervened between the Rift Valley and the Victoria Nyanza, he made with them a considerable *détour*, skirting Nandi, and reaching the Nzoia River on the north-east of the lake. He followed the Nzoia down to the shores of the Nyanza, and was the first explorer to correct the mistake into which Stanley had fallen of making Ugowe Bay a broad, vast gulf to the north-east of the lake, instead of a small indentation of the coast with a long, narrow, tortuous gulf to the south of it (now called Kavirondo Bay). Joseph Thomson stopped near the confines of Busoga, having accomplished his main object, and being given to understand that the king of Uganda would deeply resent an explorer entering Uganda through the tributary state of Busoga.

Thomson returned to the coast after revealing the existence of Mount Elgon,* Lake Baringo, and the Sūk countries, after establishing the truth of Krapf's supposed discovery of a snow-mountain to the north of Kilimanjaro (Kenya), and after giving such hints and suggestions regarding the existence of other lakes still farther to the north as to lead Count Teleki a few years afterwards to discover Lakes Rudolf and Stephanie. The rumour

* Referred to by Sir H. Stanley as "Marsawa" ("Masawa" is the Luganda name), and guessed at 7,000 feet high—in 1875.

of Thomson's approach had reached the ears of Mutesa just before his death. It revived the apprehensions of the Baganda, who were supposed to have had a legendary prophecy floating about their memories to the effect that when Uganda became subjected to a higher power the invaders would come by way of Busoga.* Consequently, when the unfortunate, rash, and ill-advised Bishop Hannington, the first Anglican bishop appointed for Uganda, attempted to follow in Joseph Thomson's footsteps, and entered Busoga in 1886, Mwanga hurriedly sent orders to Luba, one of the principal chiefs of Busoga, to slay the European, whom he, Mwanga, believed to be a political emissary. Bishop Hannington was therefore killed by Luba's men with spears not far from the site of what is now called Fort Thruston, a beautiful place on the eastern shores of Napoleon Gulf.

About this time Dr. Junker (a Russo-German explorer), who had been travelling through the Bahr-al-Ghazal regions of the Egyptian Sudan at the outbreak of the Mahdi's revolt, took refuge with Emin, the Governor of the Equatorial Provinces, who had set up a vestige of settled government on the Upper Nile, with his headquarters at Wadelai. Junker's only chance of reaching Europe was to travel by way of Unyoro and Uganda, and by dint of lavish presents to the sulky Mwanga he was allowed to pass on to Unyamwezi and the coast. Dr. Junker and the British missionary, Mackay (who was so prominent and respected a person at this stage of Uganda's history, and whose death from blackwater fever occurred just as the prospects of Christianity in Uganda were brightening), had conveyed to Europe an intimation from Emin that he was with difficulty holding his own against the advancing Dervishes of the Mahdi's, or rather the Khalifa's, empire. English feeling was much stirred on the subject of Emin, who had been a generous donor to the natural history collections at the British Museum. Moreover, England at this time had become the guardian of Egypt, and it was felt that only England could properly intervene by sending a relief expedition to Equatoria.

I must retrace my steps in the survey of the history of these regions and point out that Joseph Thomson's expedition, which came to an end in the spring of 1884, drew the attention of British geographers and of the British Government to the future commercial importance of this direct overland route to the Victoria Nyanza. Sir John Kirk, firmly believing in the commercial possibilities of these regions, had induced the Royal Society and British Association to combine in sending a scientific expedition to examine the fauna and flora of Mount Kilimanjaro. He intended that this expedition should be made the means of conveying

* This prophecy turned out truly, for the caravans of Mr. Jackson and Captain (now General Sir Frederick) Lugard followed this route.

return presents to the chiefs of that region who had political relations with him.

The author of this book happened to be the person selected to command this expedition, having not long since returned from an exploration of

175. CHIEF LUBA (OF BUSOGA), THE EXECUTIONER OF BISHOP HANNINGTON. (LUBA IS THE SEATED FIGURE; THE OTHER TWO ARE HIS SON AND, IN THE BACKGROUND, ONE OF THE SUDANESE EX-MUTINEERS WHO REVOLTED AT LUBA'S FORT IN 1897)

the Lower Congo under the *ægis* of Stanley, then laying the foundations of the Congo Free State. The political result of his work on Kilimanjaro was the conclusion of treaties which very nearly brought the whole of that mountain within the British sphere, and which at any rate were the basis from which the Imperial British East Africa Company sprang. This

company was mainly organised by the late Sir William Mackinnon, the chairman of the British India Steamship Navigation Company. As a matter of fact, had Sir William Mackinnon possessed greater faith in East Africa and moved a little sooner in the right direction, we should have secured the whole of Kilimanjaro, besides the territories which we now possess at the base of that mountain. But Sir William was cautious, and disinclined to embark his capital in East African adventures without something in the shape of a Government guarantee. Once the company had been started, however, Sir William became keenly interested in the plan for relieving Emin Pasha, no doubt with the ulterior object—not after all a discreditable one—of extending the dominion of his chartered company to the territories which Emin felt obliged to evacuate.

But there were already many international jealousies regarding the allotment of East Africa. The 1890 agreement between Great Britain and Germany seemed at that time an impossibility, and Germany viewed with considerable jealousy any transference of the Egyptian Sudan or Uganda to the British sphere of influence. Moreover, the murder of Bishop Hannington had made a deep impression, and the power of Uganda was thought to be too strong for the best-organised military expedition of that period to face with any chance of success. Consequently, as Stanley wished to reach Equatoria without travelling through Uganda or through German East Africa, he felt obliged to take the Congo route. That he succeeded in his purpose is now a matter of history, though it was at the cost of privations, miseries, deaths, delays, and disappointments which would probably all have been avoided but for the refusal of the Germans to allow him to proceed through German East Africa, or the exaggerated estimate of the difficulties which would have been met with by following Joseph Thomson's route from Mombasa past Mount Elgon to the Nile. Stanley brought away Emin Pasha, discovered Ruwenzori and Lake Albert Edward, and in a measure increased the British claims to consider these territories to lie within a British sphere of influence.

Towards the close of 1889 the detestation of the Muhammadans felt by the peasants of Uganda, and the growing influence of the Christians, decided Mwanga to make an effort to regain his throne. This effort, with the help of Mr. Stokes,* an English merchant, was eventually successful.

* As a matter of fact, Stokes was a native of the North of Ireland, a Protestant who came out as one of the lay members of the Church Missionary Society. His English wife died after the birth of a child. Some time afterwards Stokes contracted a marriage with the daughter of an Unyamwezi chief. He had by this time left the service of the Church Missionary Society, and had set himself up as an organiser of missionary transport and a trader. He was commissioned by Sir John Kirk to engage the head-men and porters of my expedition to Kilimanjaro, and very well he acquitted himself of the task. He was an impulsive man, however, and somewhat quarrelsome. I

Mwanga, as a Roman Catholic, was reinstated on the throne of Uganda. The missionaries, Anglican and Roman, returned to take up their abode in the country, and all the Christian fugitives flocked to their homes, to find Christianity officially established as the religion of the state, and many of the defeated Muhammadans taking refuge with Kabarega, king of Unyoro.

Other events not directly connected with Uganda had been taking place in Nyasaland and on Lake Tanganyika, and it was felt that the time had come for England and Germany to arrive at a friendly understanding regarding the complete delimitation of their respective spheres in East Africa. The result was the Anglo-German Convention of June, 1890—an absolutely satisfactory arrangement. By this Anglo-German Convention, Uganda and all the regions bordering on the Victoria Nyanza north of the first degree of south latitude fell to the British sphere of influence.

Since 1888, when a partial delimitation of the British and German spheres had been effected on the Zanzibar coast, and thence inland to the Victoria Nyanza, the Imperial British East Africa Company had commenced the work of administration of the coast territories, a portion of which it governed in the name of the Sultan of Zanzibar. Soon after the establishment of an administration on the coast, the company despatched, amongst other expeditions, one under Mr. F. J. Jackson, who was accompanied by Mr. Ernest Gedge, to make treaties with the chiefs of the far interior up to the Victoria Nyanza. Mr. Jackson passed through Kavirondo, and arrived in Uganda shortly after Mwanga's return, at a moment when the growing

believe he conceived himself to have been rather snubbed, or not sufficiently appreciated, by the British authorities at Zanzibar. Therefore, when the Germans began to take a hand in the scramble for East Africa, Stokes rather placed himself at their disposal, and assisted them a good deal in their negotiations with the Wanyamwezi chiefs, so that at one time he occupied a quasi official position in the German sphere as a German agent. He kept aloof latterly from politics, and was ready to serve Germans or English, one native chief against another, for fair payment. He gained an extraordinary influence over the natives, who were devoted to him. This being the case, he was able to raise porters for long expeditions as no other European could have done at that time. After the British Protectorate was declared over Uganda, Stokes turned his attention to trade with the Arabs and Manyema, who were established on the Congo Free State border. It was believed by Captain Lothaire, a Belgian officer, that Stokes was assisting the Arab and Manyema enemies of the Congo Free State with munitions of war. As a matter of fact, I believe (though Stokes was not over-scrupulous in such matters) there was not the slightest truth in the story that he had done so. He simply went to the verge of the Congo Forest to purchase ivory from the Arabs and Manyema for ordinary trade goods, and also for bills on Zanzibar. He was summoned by Captain Lothaire to his camp, and came without the least suspicion that foul play was intended. He was suddenly informed in the middle of the night that sentence of death had been passed on him by a court-martial, and he was hanged early the next morning—a cold-blooded and wholly indefensible murder.

disaccord between Catholics and Protestants and the prowling enmity of the expelled Muhammadans caused a large party of influential Baganda to desire the establishment of some kind of European Protectorate. The French missionaries of Cardinal Lavigerie's mission were opposed to the idea of a British Protectorate. They would (not unnaturally, seeing they were Frenchmen) have preferred in some way to obtain French protection for Uganda, in the hope that France meant eventually to work her way from French Congo round the north of the Congo Free State to Uganda (a dream not so impossible when one remembers the actual achievements of Marchand eight years later). Failing a French Protectorate, they would have preferred to be under German political control, some of these Catholic priests being of German or Alsatian nationality.

Mwanga really did not want any European overlordship at all. He had, however, sent to Mr. Jackson a vague request for help, which reached the former in Kavirondo at the end of 1889. Mr. Jackson replied, offering to come if Mwanga would place his country under the company's protection. Mwanga shilly-shallied, however, and Jackson went off to Mount Elgon. Whilst he was absent Dr. Karl Peters (a German traveller who had got up an expedition to go in search of Emin Pasha, but who was really bent on political adventures, and was a free lance) marched into Jackson's camp in Kavirondo, was mistaken by Jackson's servants for an Englishman, and therefore handed the letters which were awaiting Jackson's return. Dr. Peters having opened and read these, determined to go himself to Uganda and steal a march on Jackson, hoping in this way to forestall England in Uganda. Meantime the decisive struggle between the Christians and Muhammadans in Uganda had taken place near Mengo, and the young Muhammadan king, Kalema, was completely defeated, and fled. Mwanga reinstated himself at Mengo in time to receive Karl Peters, who, with the aid of the French priests, drew up a treaty which procured for Germany a Protectorate over Uganda. This treaty, of course, was disavowed by the German Government, and had no political effect. Mr. Jackson arrived in Uganda in the early part of 1890, and although he was not successful in concluding a treaty for the company with the king, he left Mr. Gedge in Uganda with a number of armed men who might be looked upon as a help to Mwanga in repelling the Muhammadans, and an intimation to any unscrupulous person* that Uganda was already in the purview of the British.

Soon after arrived Captain (now Sir Frederick) Lugard as the accredited

* By "unscrupulous" I do not imply blame on any attempt by a German to secure a German Protectorate over Uganda—an enterprise quite as defensible as the similar attempts of Englishmen. I only mean to animadvert on such conduct as the opening and reading another man's correspondence.

agent of the chartered company. Lugard marched straight on Mengo, refusing to listen to Mwanga's attempts at temporising and delay. He proposed a new treaty to Mwanga, which was for some time opposed by the French faction, but suddenly agreed to and signed on December 26th, 1890. On the following day (December 27th) arrived the first English Bishop of Uganda who ever took up his residence in that country, Bishop Alfred Tucker, who holds that position to this day. Following on this treaty of Lugard's came, however, a civil war between the Roman Catholics and Anglicans, culminating in an attack by Mwanga's adherents on the small fort which Lugard had been allowed to build at Kampala, a suburb of Mengo.

Prior to this outbreak the Muhammadan ex-king of Uganda died of smallpox, but a successor had been chosen in the person of Mbogo, and a serious raid had been made by the Muhammadans on the central districts of Uganda. Captain Lugard marched with a contingent of Baganda under the present prime minister, Apolo Kagwa, against the combined forces of the Muhammadan Baganda and the Banyoro. He inflicted a severe defeat on the Muhammadans, but had resolved, nevertheless, on the bold project of proceeding to the west coast of Lake Albert and taking over all the ex-Sudanese soldiers of Emin's province, who were established at Kavali's under Selim Bey. The ultimate result was that Captain Lugard brought Selim Bey, his 400 or 500 Sudanese soldiers, and a rabble of some 7,000 wives, followers, and children, into South Toro, where he established them in the newly created kingdom over which he had placed Kasagama (the present king), who was a prince of the Unyoro royal family.

After Lugard returned to Mengo in 1892 the long-brewing trouble between Catholics and Protestants finally burst out in civil war. Lugard's fort on the hill at Kampala was attacked by the French party (as the Roman Catholics styled themselves). The situation was saved by his Maxim gun, which repelled the attack of thousands. Mwanga fled, as he always did when war broke out, and the flag of the Imperial British East Africa Company was hoisted over his reed palace at Mengo. Mwanga took refuge with the French missionaries on the island of Bulingugwe. This island was attacked by Lugard and Captain Williams (his military assistant), and Mwanga then fled to the German frontier. After negotiations that were futile, and much shilly-shallying, Mwanga returned to Mengo, and became reconciled to Lugard. After making an attempt to settle the Muhammadan problem by winning over the Muhammadan representative of the royal family of Uganda (Mbogo) to the British side, Lugard finally left Uganda in the middle of 1892, having, it may be truly said, effected very wonderful things with very small resources. It

will be some time yet before the greatness of his exploits is thoroughly realised.

Lugard's return to England caused the whole question of Uganda to be discussed from an Imperial point of view. The East Africa Company was beginning to find that its funds were wholly inadequate for maintaining a large force of armed men in Eastern Africa, keeping the peace, and administering a territory which from Mombasa to the White Nile represented an area of something like 300,000 square miles. They gave notice, therefore, of their intention to withdraw. At the same time the French Government had espoused the cause of the French missionaries in Uganda, who, having taken sides with the Catholic party in the civil war, had suffered incidentally from the defeat of that party. The question which really lay with the British Government was whether or not a direct British Protectorate should be established over Uganda, involving the Imperial Government in the responsibility for the maintenance of law and order on the Victoria Nyanza 800 miles and more from the only possible base of operations, the coast of the Indian Ocean. It was felt that the proclamation of the Protectorate must lead inevitably before long to the serious expense of constructing a railway from Mombasa to the north-east coast of the Victoria Nyanza.

Mr. Gladstone's Administration decided to send Sir Gerald Portal as Commissioner to report on the situation in Uganda and the advisability of declaring a British Protectorate. It may almost be said that the verdict was a foregone conclusion. In 1890 the British Government had distinctly negotiated for the inclusion of Uganda within the British sphere of influence. They had encouraged the Imperial British East Africa Company to advance their responsibilities in that direction, and Sir Gerald Portal was so far convinced beforehand of the need of this Protectorate that he took with him a staff large enough to enable him to leave some of its members behind to assume the political control over Uganda before the creation of a proper Administration. Sir Gerald Portal did not stay long in Uganda, and as a matter of fact does not seem personally to have been very favourably impressed with the country. His brother, Captain Raymond Portal, a most promising officer, who had re-established law and good government in the Kingdom of Toro, died on his return from that country.

What must have impressed Sir Gerald Portal himself most unfavourably was the appalling transport difficulty, the well-nigh heart-breaking trouble of conveying constant supplies of goods over those 800 miles that separate Uganda from Mombasa. He made an excursion on his homeward journey to report on what use the Tana River might be as a means of penetrating some distance inland with water transport. He found it was

no use whatever. Soon after reaching England he was attacked by typhoid fever, and his system, weakened by the great hardships he had endured in East Africa, caused him to fall a victim to this disease. Before the termination of his mission, Colonel (now General Sir Henry) Colvile had been sent out to assist him, and Colonel Colvile for more than a year acted as Commissioner for the newly created Uganda Protectorate, making a treaty with Mwanga in 1895 which laid the basis of our Protectorate relations with Uganda proper.

Kabarega, the king of Unyoro, had, as has been shown, taken part in the civil wars of Uganda by assisting the Muhammadan faction. Wars between

176. EX-KING KABAREGA IN THE CUSTODY OF AN UGANDA CHIEF, THE KAKÚNGULU (AFTER HIS CAPTURE BY LIEUTENANT-COLONEL EVATT IN 1899; KABAREGA IS THE SEATED FIGURE WITH BANDAGES ON HIS ARMS)

Unyoro and Uganda had occurred at intervals for a century or more. Sometimes Unyoro was tributary to Uganda, sometimes it formed the nucleus of a kind of western empire, answering pretty much to the Western Province of to-day, throughout which the Urunyoro language is predominant. When the British Protectorate was declared over Uganda, it is to be feared that the Baganda chiefs, greedy for territory and spoil, rather threw difficulties in the way of Kabarega coming to terms with the British authorities. But, as a matter of fact, this native prince deserves no pity, even from those who are most strenuous in the defence of native races. Throughout his tenure of the throne of Unyoro he had used his bands of warriors to devastate Toro and Northern Uganda, and had shown

hostility and greediness in dealing with every European traveller whom fate threw in his way.

Colonel Colvile set himself to break Kabarega's power, and succeeded in the main in doing so. The result of his campaigns was to plant the British flag at Wadelai, on the White Nile (where, however, it was hauled down again by the orders of the British Government), and to hand over to the Kingdom of Uganda large portions of Southern Unyoro. Colonel Colvile established his administrative capital at Entebbe, twenty miles south of Mengo. At first it was intended to erect the buildings at the place named Entebbe, which had been surveyed for that purpose by the late Colonel Vandeleur, who, as a lieutenant, accomplished most excellent work at that period in making the first systematic survey of Uganda and Unyoro. Later on a move was made farther down the peninsula towards the open lake, and the site then selected was called Port Alice. For reasons connected with the salubrity of the site a transfer is gradually being made of the principal Government buildings back to Entebbe, two miles to the north of Port Alice.*

Failure of health obliged Colvile to return to England. His place as Commissioner was taken by Mr. E. J. L. Berkeley, who had been Consul at Zanzibar and the Administrator of the British East Africa Company, and had accompanied Sir Gerald Portal on his special mission. During Mr. Berkeley's tenure of the principal administrative post in Uganda (though whilst he was on leave of absence) the great Sudanese mutiny broke out.†

It has been already stated in this historical summary that Captain Lugard, after his arrival in Uganda as the representative of the British East Africa Company in 1890, soon realised that if he was to play a dominant part in the settlement of Uganda he must have a force of armed men at his disposal who were not Baganda. To have used the Protestants against the Catholics or the Muhammadan Baganda against their Christian fellow-countrymen would have been a direct encouragement to civil war. At the same time, the few hundred armed Swahilis from the coast—mere armed porters, without military training—were a broken reed to rely on in the event of any one of the Uganda factions turning its arms against the chartered company's representatives or the Anglican missionaries. Accordingly, he decided to introduce Selim Bey and the remnant of Emin's soldiers, who had established themselves on the north-west coast of Lake Albert. It was Lugard, therefore, who introduced the Sudanese soldiery into Uganda. But, at the time, it is difficult to see what other course he

* Entebbe was a place of some note amongst the Baganda before the days of European administration. Its name means "The Throne."

† Mr. Berkeley was transferred in July, 1899, to Tunis, as Consul-General, his place being taken in Uganda temporarily by Colonel Trevor Ternan, C.M.G., D.S.O.

could have taken if he wished to maintain peace between the contending factions and assert British control. It was certainly inconceivable at that day that Indian soldiers could be sent to Uganda, nor was it possible to obtain any other trained soldiers able to stand the climate, and at the same time quite independent of Uganda influence.

177. SUDANESE SOLDIERS: KIT INSPECTION

From the time, however, that the Sudanese were introduced into the future Protectorate trouble with them began. Themselves mostly ex-slaves, they had all the cruelty and unscrupulousness of the Nubian slave-traders, whose name, principles, and religion they had inherited.* Placed in Toro under the late Mr. de Winton, they were supposed nominally to support the power of the king, Kasagama, who had been appointed to rule that country by Lugard; but their ravages, robberies, and rapes were more terrible even than the misdeeds of Kabarega's warriors. After the greater part of them and their locust-like wives and followers were removed from Toro and placed under better control in Uganda, they rendered very efficient service in fighting the Banyoro and the rebel Baganda in the years which followed Lugard's departure, and

* Although these Sudanese soldiers were recruited, mostly as slaves, from all parts of the Egyptian and Western Sudan, and were almost without exception negroes of the most pronounced characteristics, they had developed from being slaves, armed porters, and mercenaries of the Nubian traders in slaves and ivory into a kind of continuation of this curious Nubian movement which commenced at Dongola and Khartum during the 'forties of the nineteenth century, and paved the way for the Anglo-Egyptian conquest of the Sudan. To the natives of Unyoro and Uganda these Sudanese mercenaries are always known by the name of "Ba-nubi," or Nubians.

included the work of the first railway survey under Captain (now Colonel) J. R. L. Macdonald and Captain Pringle and the organisation of an armed force under Major Cunningham. The ease with which the brave and steady Sudanese encountered and defeated large bodies of Banyoro, Baganda, and Bahima inspired them with a great contempt for the pagan or Christian natives of the Protectorate. They were fanatical Muhammadans; they secretly despised the white man as an unbeliever, and they hankered continually after the founding of Muhammadan kingdoms of their own in these fertile, easily conquered countries. Occasionally, moreover, their officers were not as well chosen as Major Cunningham and the late Major Thruston, who at any rate were able to converse with their men in Egyptian Arabic. Englishmen of no great experience of actual warfare, and of no knowledge of Arabic, were occasionally placed in command of these Sudanese, of whose intrigues they remained in absolute ignorance (through the linguistic barrier), and whose loyalty and affection they failed to secure by adopting a harsh and unsympathetic demeanour towards them.

Owing to the frightful transport difficulty which attended the bringing up of trade goods or specie from the east coast of Africa, the administrative authorities were unable to pay these Sudanese good wages at first, or even to pay the men punctually. Thus their pay got into arrears. Then, owing to stress of circumstances—the flight of Mwanga one day, the outbreak of the Nandi in the eastern part of the Protectorate soon afterwards — the Sudanese soldiers had to be hurried hundreds of miles on foot from one part of the Protectorate to another. They were apt to be tiresome about their wives. These negroes of the Central Sudan are very polygamous; even a common soldier is seldom contented with one wife, while they require to have their wives with them wherever they go. These women, it is true, do a good deal towards carrying the private effects of their husbands, and act as cooks and useful camp followers; but at the same time they are rapacious locusts, and grab without scruple whatever they can lay hands on amongst the indigenous native tribes. It became necessary, owing to the enforced rapidity of military movements, to leave this rag-tag-and-bobtail of women, children, and "boys" behind at some centre of administration, so that the men were separated from their wives and children for perhaps four or five months at a time. Serious discontent, therefore, was brewing, and treachery was being plotted amongst the Sudanese when an event occurred which precipitated the mutiny.

Colonel J. R. L. Macdonald, who had ably conducted the first railway survey to Uganda on behalf of the East Africa Company, returned to Uganda in 1897. The advance on Khartum which the British Government

had felt to be inevitable rendered it advisable that the re-conquest of the Egyptian Sudan from the north should be, to some extent, combined with an advance, of geographical knowledge at any rate, from the Uganda Protectorate into the southern part of the Egyptian Sudan. Colonel Macdonald accordingly was sent out to make this geographical survey and political reconnaissance. It was decided by the Foreign Office that he should be allowed to choose an escort from amongst the Uganda Sudanese

178. A LOYAL SUDANESE NATIVE OFFICER: REHAN EFFENDI

soldiers. When this request reached the Commandant, Major Ternan, and the acting Commissioner, Mr. George Wilson* (the Commissioner was away on leave of absence), it was received with some dismay. Nevertheless, a large body of Sudanese were told off to accompany Major Macdonald's expedition. These companies had just returned from the pursuit of the runaway Mwanga in Buddu, for Mwanga, after ineffectually

* An official who rendered great services in Uganda proper during the trying time of the mutiny. He is now Deputy Commissioner for Uganda.

plotting for the overthrow of the British authority, had fled into German territory.

Exasperated with fatigue and with the continual severance from their wives, to whom they are much attached; doubtful of the honesty of the

179. A SUDANESE SOLDIER (AUTHOR'S ORDERLY, SERGEANT FADL AL MALLAH, A NATIVE OF THE LOGBWARI COUNTRY, AND 6 FEET 3 INCHES TALL)

Administration, owing to the delayed payment of their wages;* scared at the possibility of being lost in unknown lands far beyond their ken; they determined they would not form part of the escort of Colonel Macdonald's expedition. They decided to put their grievances before an English

* Although all arrears were subsequently paid by Mr. Jackson in Colonel Macdonald's presence.

officer at Kampala. He refused to listen to them. They then resolved to carry out their orders in so far as to proceed to the Ravine station, in the Eastern Province, where they were to meet Colonel Macdonald. Here they hoped to be able to appeal to Mr. Jackson, one of the principal civil officials, whom they knew well, and in whose spirit of justice they had confidence. They felt sure that Mr. Jackson would intercede for them, and obtain the revocation of the order for their leaving the Pro-

180. TREE OUTSIDE LUBA'S (NOW FORT THRUSTON) UNDER WHICH MAJOR THRUSTON WAS KILLED BY THE MUTINEERS

tectorate with Colonel Macdonald's expedition. Arriving at the Ravine, however, they were told that the order must be carried out, though every effort would be made to maintain their wives and families in comfort whilst they were away, and that their other grievances in regard to pay and continual work on expeditions would be attended to when they returned from accompanying Colonel Macdonald.

It should, however, be stated that when these Sudanese reached the Ravine they displayed a truculent behaviour, and that they were resolved,

apparently, not to give in to any terms which involved their accompanying Colonel Macdonald. A misunderstanding unhappily arose in addition during the parley at the Eldama Ravine between an officer on Colonel Macdonald's staff and themselves, due, no doubt, to the inability to understand each other's language. The Sudanese were ordered to surrender their arms, and refused. Shots were fired over their heads, and they broke out into open revolt, swinging round and starting back for the heart of Uganda, resolved to do as much damage as possible on the way. They robbed and looted stores, and finally, by treachery, obtained the surrender at Luba's of the persons of Major Thruston and other Europeans. Major Thruston, who with splendid heroism had deliberately entered the Sudanese lines

181. STEAM-LAUNCH *VICTORIA* (NOW PLYING AGAIN ON THE NYANZA)

for the purpose of reasoning with the mutineers and bringing them back to their allegiance without bloodshed, was (with the engineer of the little steam-launch *Victoria*, Mr. Scott) shot under a tree outside Luba Fort. The Government steam-launch *Victoria* was captured and partially destroyed.

The incidents which followed are too recent and well known to require recapitulation. Colonel J. R. L. Macdonald, assisted by Mr. Jackson and other officers and officials, and by members of the Church Missionary Society as non-combatants,* succeeded after dogged fighting, carried on under the most difficult circumstances, in breaking the power of the mutineers, and chasing them away from the settled districts of the Uganda Protectorate.

* Mr. G. L. Pilkington, B.A., C.M.S., was killed in attending to wounded men.

Kabarega of Unyoro, and Mwanga of Uganda, took advantage of the Sudanese mutiny to join hands with the Sudanese in a final effort to overthrow the British Protectorate. The eventual result was their

182. MR. F. J. JACKSON, C.B.

complete defeat and capture at the hands of a British force (Indian soldiers and Baganda allies) under Lieutenant-Colonel J. Evatt, D.S.O.

Kabarega, who for some time past had been a fugitive in Unyoro, chased out of that country by a British and Baganda force, hung about

the Nile ready to lead raids at any time into the settled country, while Mwanga equally distressed the Districts of Buddu and Ankole in the south-west. They really represented stronger forces than the Sudanese, who had won to themselves hardly any following amongst the natives. Mwanga and Kabarega had become the natural leaders of all that section of the populace who clung to old customs, old savagery, slavery, and polygamy—to everything, in fact, which European interference opposed or disapproved. The capture and exile of these two kings have drawn the thorn out of the wound of that portion of the Uganda Protectorate represented by the Kingdom or Province of Uganda and the Western and Central Provinces, and the wound has latterly healed. They have enjoyed almost unruffled peace since the deportation of these recalcitrant chieftains. I write "almost" unruffled, because, up to the time of my leaving the Protectorate, a remnant (103) of the Sudanese mutineers had still remained in existence in a rather remote part of the Central Province (the Lango country); and as they were making themselves objectionable by raiding the adjoining natives, or attracting to themselves other bad and lawless characters, the present writer was obliged to take measures for their complete dispersal. Seven, by the offer of terms of pardon, were won over from the mutineer ranks, and the residuum (ninety-six) has since been completely overcome by an expedition under Major C. Delmé Radcliffe, Captains Petrie and Harman, and Lieutenant Thomas Howard. After four months' obstinate fighting in the nearly unknown Lango country to the north of the Victoria Nile, fourteen of the mutineers died or were killed and the remainder of the ninety-six recalcitrants were taken prisoners.

Hitherto this summary of the history of this Protectorate has chiefly concerned itself with the affairs of Uganda and Unyoro, which at most form one and a half provinces out of the six which (until April, 1902) composed the Uganda Protectorate. The fact is, that the remaining provinces, being in a far more backward and savage condition, have had very little political history to record. The districts of the Nile Province, which were abortively annexed by the hoisting of the British flag at Wadelai by the late Captain "Roddy" Owen in 1894, lay for the most part under the power of the Mahdi, since they were liable in the riverain countries to Dervish raids. An expedition, however, under Colonel Martyr in 1898 carried the British flag as far down the Nile as Fort Berkeley (Bedden), and the outposts of the Dervishes at Bōr and other places on the White Nile had either been rendered untenable by the accumulation of the sudd and the cutting off of supplies or melted away with the news of the capture of Khartum.

In the eastern part of the Protectorate there had been trouble on one or two occasions with the Masai—trouble provoked by the interference in their affairs of a Scotch trader, who lost his life in a Masai attack. In

1895 the Imperial Government had resolved to construct that railway from Mombasa to the Victoria Nyanza which was the indispensable condition of the secure maintenance of British control over the regions about the sources of the Nile. The preliminary railway surveys had always avoided the direct route to the lake through the Nandi country, partly because an exaggerated impression had been formed of the difficulties of climbing the Mau Escarpment in this direction, and partly owing to the truculence of the Nandi, a tribe who had shown themselves at all times very ready to be hostile to Swahili caravans and European expeditions. It is to be

183. MWANGA, EX-KING OF UGANDA (THE FIGURE ON THE RIGHT-HAND SIDE), IN CHARGE OF AN UGANDA NATIVE OFFICER, ANDREA

feared, from what we know of the way in which Swahili traders treat the natives of countries they traverse, that the blame for this hostile attitude on the part of the Nandi originally rests with the Zanzibar and Mombasa caravans, while in 1895 the first actual outbreaks of the Nandi against Europeans were provoked by the aggressions of the Scotch trader, Dick, who subsequently lost his life at the hands of the Masai owing to similar behaviour. However that may be, the Nandi carried their reprisals too far, and an armed expedition had to be sent against them from the headquarters of the Uganda Protectorate—an expedition which effected very little owing to the difficult nature of the country and the insufficiency of soldiers. But the personal action of Mr. Jackson (until recently acting

184. DAUDI CHUA, INFANT KING OF UGANDA, WITH HIS TWO SISTERS (THE FIGURE ON THE RIGHT IS MUGWANYA, ONE OF THE REGENTS)

Commissioner for the Uganda Protectorate), who resided close to the Nandi country at the Eldama Ravine, did much to allay for a time the hostility of the Nandi, and it became possible to make an exploration of their country and that of a kindred tribe, the Lumbwa.

In this way, and through the pioneer work of Mr. Jackson and Mr. C. W. Hobley and other officials of the Uganda Protectorate, the surveyors of the Uganda Railway became aware that a direct and not very difficult route existed from the Rift Valley to Kavirondo Bay by the now celebrated Nyando Valley, which is an uninhabited stretch of country between the Nandi and Lumbwa tribes. About this time also a great deal of excellent work had been done by such officials as Messrs. Hobley, Foaker, W. Grant, and Tomkins in organising the administration of the Kavirondo countries and Busoga. A Kavirondo chief, Mumia, who had received and assisted Joseph Thomson in 1883, and who is still alive and vigorous, had from the very first regarded the British officials and the idea of a British Protectorate with hearty good-will. His influence through all the troubled times of Uganda had done much to secure the safety of British communications with the east coast.

The Sudanese mutiny had entailed on the Administration of Uganda a terribly heavy expenditure, and had done further harm in delaying for several years a complete settlement of the local Administration, the land question, and the institution of native taxation. Mwanga and Kabarega had been captured and sent out of the country to exile, first at Kismayu, and latterly in the Seychelles Islands; Unyoro had been permanently occupied by British garrisons, and after Mwanga's flight in 1897 his infant son had been placed on the throne by Colonel Trevor Ternan under a regency of three Uganda chiefs. It was considered by the Imperial Government that the time had arrived to set on foot a complete settlement of the administrative affairs of this Protectorate and more economy and efficiency in the direction of its finances. The constant wars which had followed the establishment of the Protectorate had ended by placing nearly all the administrative and civil control of the country in the hands of military officers, a result which, although it gave evidence of marked ability in some of these soldiers, was not by any means a satisfactory or economical procedure. Accordingly, it was decided to appoint a Special Commissioner, who should at the same time hold unquestionably the highest military rank in the country, who should attempt to bring about such a settlement, reorganise the finances and armed forces, and report to the Government on the possibility of creating a local revenue sufficient to meet eventually the cost of the Administration. The author of this book was the individual selected to carry out this task, and the results of this Special Commission will be briefly set forth in the following chapter, together with a sketch of the present lines on which the Protectorate is administered.

CHAPTER VIII

THE WORK OF THE SPECIAL COMMISSION, ETC.

THE present writer started for Uganda in 1899, accompanied by Mr. J. F. Cunningham * as secretary to the Special Commission, Mr. Alexander Johnston as private secretary, and Mr. W. G. Doggett as naturalist.† The Uganda Protectorate was reached in the early part of October. Some weeks were spent at Naivasha and the Eldama Ravine looking into questions connected with the transport and the political affairs of the Masai, Kamásia, and Nandi tribes. A journey was then made along the Nyando Valley to Kavirondo Bay to inspect the proposed route for railway and telegraph. The Special Commissioner then journeyed through Kavirondo and Busoga to the Kingdom of Uganda, which was reached at the end of December, 1899. He considered that no satisfactory attempt could be made to settle the question of native taxation, military service, tenure of land, or any other important question affecting the rights or sentiments of the natives which did not commence by a special agreement with the Kingdom of Uganda. He was led to believe, and believes still, that on the Kingdom of Uganda mainly rests the maintenance and justification of the British Protectorate over these regions.

After negotiations lasting about two and a half months an agreement was finally drawn up and signed by the regents (on behalf of the young king) and the leading chiefs of Uganda, and by the Special Commissioner on behalf of Her late Majesty the Queen, which provided a settlement for the following points amongst others: The Kingdom of Uganda was divided into twenty districts, each district being placed under a chief appointed by the king of Uganda, but having his appointment confirmed by the principal representative of His Britannic Majesty's Government. These twenty chiefs were to be under the control of the king of Uganda, who

* At that time secretary to the British Central Africa Administration; now secretary to the Uganda Protectorate.

† The author was also accompanied by an English servant (Vale) as camp-master in charge of porters, and by his old Zanzibari head-man, Ali Kiongwe, who has been with him on most African journeys since 1884. *Vide* "British Central Africa."

185. MR. W. G. DOGGETT, NATURALIST ON THE SPECIAL COMMISSIONER'S STAFF, ENGAGED IN MEASURING A MUAMBA NEGRO

was to be assisted in his government by a native council or parliament elected on lines laid down in the agreement. The power of life and death was reserved to the principal representative of His Britannic Majesty in the Uganda Protectorate, who might also intervene when necessary to modify excessive punishments of any kind. The native ruler

186. ALI KIONGWE, THE AUTHOR'S SWAHILI "HEAD-MAN"

of Uganda was to receive the official title of "kabaka," and to be officially recognised by the British Government as His Highness the Kabaka of Uganda, and to receive, moreover, a salute of guns on ceremonial occasions. The Kabaka was to attain his majority at the age of eighteen, and until that period the Government was to be carried on by regents in his name, appointed by the British Government. The civil list of the king, and salaries of the regents during the regency, and of the native ministers after the king attained his majority, certain pensions to princes and princesses of the royal family of Uganda, and the salaries of the twenty chiefs of districts, were stated at fixed sums, and it was agreed that the British Administration of Uganda should pay this civil list and these salaries annually out of the funds of the Protectorate. The king and chiefs were not to exact any further payments from their native subjects. All natives of Uganda were henceforth liable to pay a hut and a gun tax of the value of three rupees (4*s.*) each annually. (Thus a native of Uganda owning both a hut and a gun would have as maximum taxation to pay to the Protectorate 8*s.* a year.)

The agreement also dealt with a settlement of the land question. A little less than half the area of the Kingdom of Uganda was to be divided as the private property of the king, princes and princesses, the chiefs, and a large number (some 2,000) of native landowners. The remainder, including the forests, was to be handed over to the control of the British Government. A few other points of minor importance were provided for. This agreement therefore secured to the king, chiefs, and aristocracy* of the Protectorate the tenure of all the land they occupied, had placed under cultivation, or used as grazing ground. The waste and uncultivated lands and the forests were handed over to the British Government to be dealt with by them on the same lines as those on which they would deal with the Crown lands of a Crown colony. Native taxation henceforth was to be turned to the general support of the Protectorate, and natives were protected from illegal exactions at the hands of their chiefs; at the same time the irregular revenues of the king and chiefs,

* These again being pledged to a proper treatment of their native tenants. Any landless *native* of Uganda can acquire cultivable land from the Administration at almost nominal rent.

derived hitherto from an uncertain tribute, were fixed on a fairly generous scale, and were henceforth to be paid to them by the British Administration of the Protectorate. Moreover, in return for the cession of rights over waste lands, the king and some of the chiefs received an immediate payment in money.

As soon as this agreement had been approved by the British Government and its provisions had become known to the more intelligent amongst the natives of the Protectorate, there was very little difficulty, except where Europeans had never penetrated, in inducing the natives of other countries to accept a settlement on similar lines. The kings of Toro and Ankole were dealt with by separate agreements similar to that concluded with Uganda. The general provisions of these agreements as regards land and native taxation were made to apply to the rest of the Protectorate. Perhaps this settlement of the land question did more than anything else to conciliate suspicious native tribes and chiefs and bring

187. THE AUTHOR'S SOMALI "MAJOR-DOMO," AHMAD BIN WARFA

about a friendly adhesion to the theory of native taxation. Satisfied that they would not be turned out of the land which they occupied and had under cultivation, the natives became very reasonable on the general

question of supporting the finances of the Protectorate by their own contributions towards its general revenue.

Mr. Jackson (now Deputy Commissioner for East Africa) became Deputy Commissioner in Uganda, and did much to settle the affairs of that kingdom. Mr. George Wilson rendered the like services in Unyoro.

Arrangements were then made to divide the Protectorate definitely into provinces (six), and these again into districts. It was laid down as a general rule that a province should ordinarily be under the direction of a sub-commissioner, while the collectors and assistant collectors should be placed in special charge of districts or places. Recognised native chiefs are supposed to deal out justice (reserving matters of life and death) to their own subjects. The sub-commissioner, collectors, and assistant collectors hold generally magistrates' warrants and administer justice to Europeans and all persons not native to the Protectorate, in addition to their work of collecting the revenues and generally presiding over the maintenance of law and order in their respective districts.

With the aid of Colonel A. H. Coles, D.S.O., and Lieutenant-Colonel J. Evatt, D.S.O., the reorganisation of the armed forces had proceeded apace. In this connection the problem was how to provide at a fairly cheap rate a sufficiently large body of men to keep order in the settled and administered districts of the Protectorate. After the Sudanese mutiny the Foreign Office had raised for a time the pay of the Sudanese troops to a maximum of twenty rupees a month. This was subsequently reduced to eighteen rupees, as that was the maximum given to the trained Indian troops who volunteered from the Indian Army for service in Uganda. But it seemed to the present writer that even eighteen rupees a month was too much to pay Negro soldiers whose training, discipline, marksmanship, and valour were not at the same high level as those of our Indian soldiers. He proposed, therefore, that the maximum pay of Negro soldiers in the Uganda Rifles should gradually be reduced to sixteen rupees a month. Even at this rate, however, the upkeep of a force sufficiently numerous to meet all the requirements of the Protectorate would be too expensive. It therefore occurred to the Special Commissioner that the ordinary maintenance of order might be very well carried on by a constabulary, and that the trained troops, consisting of the Indian soldiers, the Sudanese, Baganda, Somalis, and other negro soldiers of worth, might be reserved for actual warfare, for expeditions against powerful tribes, or the suppression of serious risings. Consequently, the number of soldiers serving in the Uganda Rifles was diminished, and a constabulary, working under British police officers (non-commissioned officers from the British Army), was raised to a force of about 1,500 men. Including the Indian troops, therefore, the Uganda Protectorate has on paper, and probably in actuality

188. THE LITTLE KING OF UGANDA

at the present time, a total armed force of something like 3,500 men, 1,500 of which are constabulary.* In addition to this force, however, we have the whole nation of the Baganda to draw on as a militia by our treaty rights.

189. THE KING OF UGANDA INSPECTING HIS INDIAN GUARD OF HONOUR

Not long after the treaty of March 10th, 1900, was concluded, the value of this condition was tested by the Baganda chiefs being asked to raise a force of 3,000 men to co-operate with the Uganda Rifles in the Nandi country. The response to this appeal was an immediate one, Over 5,000 men presented themselves for enrolment instead of the 3,000 originally asked for; 2,000 of these had to be sent back to their homes, reluctant at not being allowed to serve. It should also be mentioned that we have most valuable native auxiliaries in the whole of the Masai who dwell within the limits of the British Protectorate. All the fighting men of this nation are ready at very short notice to accompany a British expedition anywhere

* These numbers and proportions have been somewhat reduced and altered since the transference of the Eastern Province to the East African Protectorate.

in the Eastern and Rudolf Provinces. The Kamásia tribe of Nandi race dwelling to the north-east of the Nandi country has also furnished us with contingents of fighting men; the Kavirondo come forward as military porters; while of course in the Nile Province we have an admirable recruiting ground for further regiments of Sudanese.

The finances of the Protectorate were brought into order mainly through the work of the chief accountant, Mr. G. D. Smith, and the second accountant, Mr. Alexander Boyle. The local revenue during the two years of the Special Commission rose from about £23,000 in 1898–1899 to £66,000 in 1900–1901, mainly through the sums received from native taxes.

The telegraph service was extended from the eastern shores of the Victoria Nyanza to the Kingdom of Uganda, and has thence been carried on towards the Nile. It has been detached from the Uganda Railway management, and placed under that of the Protectorate. The postal service of Uganda the Special Commissioner thought better to fuse with that of

190. HOIMA, THE NEW CAPITAL OF UNYORO, ESTABLISHED IN 1900 BY MR. GEORGE WILSON, C.B.

East Africa, and place the whole under the management of the Postmaster-General at Mombasa. It may be mentioned that as the result of the work carried on by the East African postal authorities, coupled with the extension

of the railway and the placing of a steamer on the Victoria Nyanza, mails, instead of being delivered a doubtful once a month from England, seven weeks old, are now delivered three and sometimes four times a month twenty-six days after leaving England.

Admirable botanical gardens were created by Mr. Alexander Whyte at Entebbe, besides much useful work in planting round the native capital at Mengo. Finally, it may be mentioned, the Special Commission, helped by the officials of the Uganda Protectorate, was enabled to

191. A BUNGALOW AT HOIMA

send home collections of zoological and botanical specimens, specimens of the rocks and minerals of the Protectorate, and many interesting ethnological objects to illustrate the arts and industries of the people. The entirety of these collections was presented to the British Museum. The twin museums of Bloomsbury and Cromwell Road had the first choice of specimens. What was left over has been divided amongst the museums of Edinburgh, Dublin, and Cambridge. A large number of measurements of types of native races were taken by the Special Commissioner and Mr. Doggett, and about a thousand photographs, many of which appear as illustrations to this book.

The Special Commissioner's stay in Uganda was unfortunately coincident with one war, though he had hoped that the era of wars with the natives had closed. But the Nandi tribe, who had shown themselves at different times very inimical to the white man, and who had never been effectually subdued owing to the mountains and dense forests of their country, commenced a series of aggressions against us which at last became unbearable. So far as we are aware they had absolutely no grievance to complain of. Caravans had ceased to traverse their country,

192. "GOVERNMENT HOUSE" AT HOIMA, UNYORO, IN PROCESS OF BUILDING

as the Nyando route along the projected railway was preferred. No taxation had been imposed on the Nandi; in fact, on account of their waspish nature, they had been left severely alone. But the erection of the telegraph wire along the Nyando Valley and through Kavirondo had tempted them to acts of aggression. The copper wire represented considerable value in their eyes, and the temptation to descend at night-time and cut a mile or two of wire from between the posts in order to temporarily enrich themselves became irresistible. When these robberies were punished the Nandi replied by destructive raids on transport carts, mail carriers, and isolated telegraph stations. The difficulty, therefore, had

to be faced, and a very strong expedition under Lieutenant-Colonel Evatt was sent into the Nandi country in the summer of 1900. Hostilities lasted until November, when the Nandi, having had enough fighting,

193. THE TEMPORARY RESIDENCE OF THE COLLECTOR FOR THE UNYORO DISTRICT

sought for and obtained terms of peace. Two months after the peace was concluded, the Special Commissioner travelled in all directions through their country, meeting everywhere with a perfectly friendly reception, and it may be considered now that the Nandi have settled down for good; in fact, many of their young men are already presenting themselves for enrolment in the Uganda police force.

At the present time the European Administration of the Uganda Protectorate is not unnecessarily extended, and is confined in the main to those districts where the presence of European or Asiatic traders or settlers obliges the establishment of British officials to ensure the maintenance of law and order on the part of the foreigners quite as much as on that of the natives. In those districts where it is not at present necessary to station European officials, and consequenly where no direct expenditure of Imperial funds takes place, no taxation on the natives is imposed, the general theory being that the native should pay for the protection which

he receives, and if native chiefs are unable to so govern their people as to ensure peace and quiet in their countries and protection to foreigners, thereby obliging the Administration of the Protectorate to intervene, they must pay hut and gun taxes as the result of not being able to manage their own affairs. As circumstances render it advisable, no doubt, little by little, no district of the Uganda Protectorate will be left without European supervision, and consequently, theoretically, all natives will pay for the upkeep of the Protectorate. Should this be the case, the entire theoretical native taxation of the whole Protectorate should, in money, suffice to meet the entire cost of administration. But it will be a long time before an equilibrium in the Uganda finances is attained in this way only.

194. THE AUTHOR'S BUNGALOW ("COMMISSIONER'S HOUSE") AT ENTEBBE, BUILT BY MR. SPIRE

Even supposing the entire male population of the Protectorate was ready to pay taxes, they have not at present the money to pay in. This can only come to them by the opening up of the Protectorate to commerce.

Commerce will induce the native to develop the resources of his own land in order that he make money by the sale of its products. He will also be able to do work for the foreign merchants and settlers, and thus earn money by a reasonable degree of toil. So long, however, as the natives set themselves resolutely to maintain the Protectorate and a civilised administration over their territories, so long I consider that the Administration should uphold native interests and welfare first of all.

Concurrently with the work carried on by this Special Commission, the construction of the Uganda Railway, which had been commenced in 1896, was rapidly bringing a great influence to bear on the affairs of the Uganda Protectorate. The construction of the railway did not proceed as easily and quickly as was at first hoped, and the expense of its construction had greatly exceeded the original estimates. This was due, in the first place, to the absence of any really certain and scientific information regarding the country which the railway was to traverse. With the exception of Sir John Kirk, no one on the Railway Committee had had any knowledge from personal experience of inner Africa, and the engineers selected for the designing and construction of the line were only hitherto acquainted with India, Mexico, and other tropical countries where the local conditions are really very different to the deserts, steppes, swamps, rainy plateaux, and crumbling mountains which intervene between the sea-coast at Mombasa and the shores of the Victoria Nyanza. Whether the Government of the day would have done better to have sought for trained assistance from the colonial Government of such African colonies as Natal is a point worth arguing by those whose only idea is to find fault with any considerable enterprise of this kind undertaken by a Government department. The chief engineer and manager appointed from the first—Mr. George Whitehouse; his second in command, Mr. Rawson; and their colleagues on the engineering staff have patiently grappled with every difficulty in turn, and have amply justified their original selection. The work they have accomplished is a splendid one.

Although it would appear now, on the strength of reports published by the Foreign Office itself, that with omniscience and no engineering strike in England the Uganda Railway could have been constructed for about £750,000 less than it has eventually cost, and it is clear that the former estimates as to time were far too favourable, it is nearly as certain that had any private company undertaken the railway it would have fallen into just the same blunders, and perhaps have ended half-way to the lake in hopeless bankruptcy. The great difficulty which attended the first four years of railway construction was the almost total absence of local labour. The coast population of East Africa did not care for work on the railway or for steady

195. A LUNCHEON AT ENTEBBE ON THE LATE QUEEN'S BIRTHDAY

work under contract of any description. Beyond the belt of coast population the human inhabitants of the wildernesses which the railway had to traverse from forty miles at the back of Mombasa to the frontier of the Uganda Protectorate were very few in numbers (anywhere near the line), weakened

196. THE FIRST BOW WINDOW IN ENTEBBE

by a succession of droughts and famines, and by no means disposed to work hard with their hands at that period when the European was viewed with great distrust, and the remembrance of the Arab and Swahili slave-traders was still too strong in the minds of the natives to induce them to believe that work of this description would be honestly paid for month by month. Consequently the entire labour, skilled and unskilled, for the

197. IN THE AUTHOR'S SITTING-ROOM AT ENTEBBE

construction of this line, at any rate as far as the Mau Escarpment, had to be imported from India.

But in spite of disappointments, checks, strikes, "wash-aways," dry watercourses that turned into persistent floods, and perennial rivers which suddenly ceased to flow, the railway did advance, until at the time of writing it is now open for traffic the whole way to Kavirondo Bay on the

198. THE AUTHOR'S STUDY AT ENTEBBE

Victoria Nyanza. The blessings of this railway to inner Africa are almost incalculable. The journey from London to Entebbe, the capital of Uganda, can be effected now in twenty-four days as against something like four months in former times. The native of Uganda who wishes to trade with his products on the East African coast or to journey far afield in quest of profitable employment can reach that coast by steamer and railway in a week at the outside, and return with the same certainty and speed. All the accumulated commerce of East Central Africa will gravitate to the fertile shores of the Victoria Nyanza, where there is everywhere abundance of food. From any point on the shores of that lake commercial products can be carried, easily and cheaply, by steamer, to the railway terminus, and can be transported by the railway (it is to be hoped at reasonable

199. THE AUTHOR'S DINING-ROOM AT ENTEBBE

rates) in from two days to a week to Mombasa, whence the produce can be shipped to all parts of the world. Consequently, the railway has almost entirely abolished the caravan trade throughout a considerable slice of East Central Africa. This has done away with the need for slaves, and with the hardships which even the paid porters engaged on the East African coast had often to endure on journeys through deserts and swamps and over frosty mountains to Uganda.

It is true that considerable scope still exists for subsidiary trade caravans starting away from any point on the Uganda Railway to the north, south, and west. But not only is the need for the use of human porterage further curtailed by the facilities for water transport offered by the vast area of the Victoria Nyanza and the not far distant waters of the navigable Victoria Nile (with Lake Kioga, etc.), of Lake Dweru and Albert Edward, and of Lake Albert and the navigable White Nile; but even then a start from a railway base, where all the comforts and requisites for a caravan journey can be obtained, to any point in the territories of the Uganda Protectorate, is a far less uncomfortable, lengthy, and unhealthy undertaking than the old journey from Mombasa for 600 or 700 miles inland to the nearest point at which profitable trade could be conducted. Moreover, the railway, as it passes through the disappointing territories of British East Africa, will cause these territories to cease their disappointment, just as French railways in Tunisia and Algeria are making the very desert habitable and profitable. Alongside the line settlements secure from the raids of lawless tribes, provided with the certainty of water, provisions, and communication with the outer world, are springing up; cultivation and irrigation are producing crops and maintaining live-stock, which the railway rapidly turns into money. The natives are acquiring a taste for regular, well-paid work, and have an incentive to work in the (to them) inexpressible delight of travelling at a rapid pace in a third-class carriage.

So far from leading to the extermination of the game, the railway has actually come to the fore as a means of game preservation. It is really amazing how all the wild animals, except perhaps the lion, have taken to the railway. The big and small game soon realised the fact that they were shot at less and less from the railway line, and finally not at all, while on the other hand the lions, and perhaps leopards, were perturbed by the noise of the train, and began to shun the line, for, as regards shooting, exceptions were naturally made in their favour! However strict have been the Game Regulations in force for the protection of game along the line, naturally no restriction has been placed on the shooting of lions, leopards, and hyænas. Whether or not these deductions are fanciful, the plain fact remains to be testified to by any one who now takes a journey on the

Uganda Railway that from the windows of his carriage he can see as the train crosses certain tracts positive zoological gardens let loose. Rhinoceroses, sometimes even elephants, zebras, gnus, hartebeests, gazelles, reedbuck, waterbuck, oribi, and ostriches can be noted by an observant traveller as the train whizzes over the Athi Plains, up the Rift Valley, and over the green downs of Njoro.

The Uganda Railway will carry much goods and many passengers for the Government of German East Africa, and, not improbably, material and men for the north-eastern part of the Congo Free State; for, as a counterpart to the railway, a fleet of steamers managed in connection with it will be placed on Lake Victoria. This will enable the management of the railway to land goods and passengers within a week from the East African coast at any part of German East Africa on the shores of the Victoria Nyanza. In like manner passengers can be landed at ports on the west coast of the lake, and if good roads for wheeled traffic are maintained between the west coast of the Victoria Nyanza and the district of Toro, a week's journey may convey passengers past the slopes of Ruwenzori to the frontier of the Congo Free State. The same time might also take them to Lake Albert Nyanza, from which steamers could convey them to the end of navigation on the Upper Nile. It is a fairly safe prophecy to make that the Uganda Railway in ten years' time will be returning a handsome profit on its working expenses—such a profit as may enable a prudent Government to gradually pay back to the nation the original cost of its construction. In any case the railway was the inevitable concomitant of the declaration of the British Protectorate over Uganda. The justification for this Protectorate, and the possible profit it may bring to the British Empire, will be discussed in the next chapter.

With the present organisation of the Uganda Protectorate—an organisation which one cannot but regard in some respects as provisional—there is the following system of government: A Commissioner and Consul-General appointed by the Secretary of State for Foreign Affairs represents the Imperial Government. He is at the same time (theoretically) the Commander-in-Chief of the armed forces. Under him is a Deputy Commissioner. Then follow three sub-commissioners, who are placed over three of the six* provinces into which the Protectorate is divided (Uganda proper being the "home" province where the Commissioner and Deputy Commissioner reside). Next in civil rank come the collectors' assistants, from amongst whom would be chosen the collectors of districts. (The duties of a collector I have already explained. He is political officer, magistrate, and collector of Imperial revenues in a district, or it

* Now five, since the Eastern Province was transferred (April 1st, 1902) to East Africa.

may be at a single station.) Finally there are the assistant collectors, some of whom are placed alone in charge of secondary stations in a district; others reside at the same station with a collector or a sub-commissioner, and assist the officer of superior rank. Besides these officials employed in the administration of political affairs and of justice and the collection of revenue, there are others employed exclusively in the Treasury or Accounts Department, and others in the Secretariat. There is a Survey Office for the general survey of the Protectorate lands, a Scientific Department which presides over agriculture, the collection of meteorological records, the supervision of the regulations for protecting game, etc. In addition to the collectors who act as magistrates, there is a special Judicial Department, at the head of which is placed a legal vice-consul who is Judge and Chief Justice for the whole of the Uganda Protectorate. There is a Public Works Department and a Transport Department, which, even after the completion of the railway and the steamers, will attend to the upkeep of main roads and transport of goods and passengers in the countries west and north of the Victoria Nyanza.

As regards the armed forces, there are the Military and Marine Departments. The Marine Department, at present under the able direction of Mr. C. W. Fowler, late R.N., C.M.G., has under its control the recently constructed steamer *William Mackinnon*, two steam-launches, and a large sailing vessel. The *William Mackinnon* is armed with a powerful gun, and could be used if necessary for such elementary naval warfare as might occur on the Victoria Nyanza. As the transport facilities on the lake increase by the establishment of a mercantile marine, so no doubt the official Marine Department of the Protectorate will confine itself mainly to the policing and patrolling of the waterways. The little army in Uganda is placed under the direction of an Inspector-General (who controls all the armed forces of the Foreign Office Protectorates), of a Commandant—at present Colonel A. H. Coles, D.S.O.—and a staff of something like thirty English officers, including those of the Indian contingent. The force under this department consists of the 4th Battalion King's African Rifles (Negro soldiers—Sudanese, Baganda, Somalis, etc.), the 5th K.A.R. (Indian contingent)—about 400 Panjabis and Sikhs from the Indian Army; and the constabulary or police, some 1,060 men (Negroes) under British police officers, who are non-commissioned officers from the British Army.

The present administrative capital of the Uganda Protectorate is at Entebbe, on the peninsula of that name which juts out into the Victoria Nyanza, twenty miles south of the native capital of Mengo.

Up to the present time the administrations of the East Africa and Uganda Protectorates have remained separate, each answerable direct

to the Foreign Office. The Protectorate of Zanzibar is a native state theoretically administered by the Sultan and the ministers whom he appoints. The representative of the British Government at Zanzibar is at the present moment also Commissioner and Consul-General for East Africa, a portion of the coast-lands of the East African Protectorate being regarded as part of the Sultan of Zanzibar's dominions, and administered to some extent in his name. This coast Province of Sayyidieh is still subject to the inconvenient and harassing treaty rights of other European Powers, rights which were unfortunately not got rid of (as they should have been) when the British Government assumed a

200. THE SS. *WILLIAM MACKINNON*

Protectorate over Zanzibar. Negotiations for the abolition of these special treaty rights are in progress with Germany and France, but have not, I believe, been yet brought to a successful issue. Consequently a small portion of the East Africa Protectorate is being administered under rather exceptional conditions as though it were a portion of the territories ruled by the Sultan of Zanzibar.

In addition to these three East African Protectorates may be mentioned Somaliland, a territory immediately opposite Aden, which consists of a considerable slice of the Northern Somali coast-lands. To any one able to take an unprejudiced and large-minded view of the present situation in East Africa, it must appear highly desirable that all of these four Protectorates—

or at any rate the Protectorates of Uganda and East Africa—should be placed under one administration, conducted by a competent official with the rank of a High Commissioner. Uganda is merely the hinterland of East Africa. East Africa is mainly valuable as being the region furnishing the best seaports for the outlet of the products of Uganda. The postal services of the two Protectorates were already fused under the Special Commission. It is difficult to see why the fusion of other departments should be delayed. It would lead to a decided economy in the number of officials, to the complete absence of any further friction caused by the emulation of two rival Protectorates as to which should show the highest local revenue, and to a single policy being adopted throughout on all questions of importance affecting the natives. At the present time appeals from the law courts of these two Protectorates are sent to Zanzibar, where the judicial officers appointed to try these appeals know little or nothing of native laws and customs and the general conditions of inner Africa. Moreover, Zanzibar, like Mombasa and Entebbe (or any other spot in the Kingdom of Uganda), is not thoroughly healthy for the residence of Europeans—very much the reverse. We have, on the other hand, in the Eastern Province of the Uganda Protectorate a remarkable area of absolutely healthy country. Apart from the Nandi Plateau—wherein I have fancifully sketched out a territory as large as Belgium, and almost without existing human inhabitants, which should become a future White Man's Colony—apart from the Nandi Plateau, the area of absolutely healthy country is not exhausted. The whole Rift Valley, from Naivasha on the south to near Lake Baringo on the north, is almost equally healthy, though not equally well adapted for the handing over *en bloc* to the white man. Why should not, one asks—and no effective negative reply can be given —a central Government for all British East Africa be founded at some suitable spot on the railway, on the Nandi Plateau, some Simla of East Africa, with an absolutely healthy European climate?

An administrative capital founded here would be only thirty-six hours' journey even by the existing slow trains from Mombasa, and therefore twenty days from London, two days from Zanzibar, seven days from British Somaliland, two days from the administrative capital of Uganda, ten days from the Congo Free State boundary, the Albert Nyanza, and the Albertine Nile, and not more than three weeks even by the existing means of communication from the frontier posts on the Uganda side of the Egyptian Sudan. The Eastern Province of the Uganda Protectorate might become the home province of this great East African territory, in the heart of which would reside the Governor-General or High Commissioner. Separate commissioners might still be appointed for the special management of Uganda

(to reside at Entebbe), of the Coast Province (at Mombasa), at Zanzibar (to supervise the administration of the Sultan's Government), and at Berbera (to conduct the affairs of British Somaliland). But the budgets of the Imperial expenditure in all these Protectorates might be combined in one by the Treasury of the High Commissioner on the Nandi Plateau. Here also might sit a Supreme Court for East Africa. From this post also might be managed the Uganda Railway and the direction of all the Imperial forces in the East African territories.

201. ON THE DECK OF THE *WILLIAM MACKINNON*

This plan would certainly ensure the regular and good government and orderly finances of the British Protectorates in East Africa. It would also be attended to here that the Uganda Railway was maintained and conducted not only with a view to the eventual return to the British taxpayer of the money expended on its construction, but also in strict relation to the needs and requirements of East Africa. It is obvious that a direction carried on from East Africa would be better acquainted with the needs of the Protectorates and the best methods to be adopted on the railway than a managing committee meeting in London. The High

Commissioner also, being responsible for the welfare of the whole of British East Africa, would be actuated by no petty feelings of special interest in Uganda, in Mombasa, in Somaliland, or in Zanzibar to champion one part of the territories under his government more than another. The adoption of this policy would relieve the Foreign Office of a great deal of responsibility.

In concluding this general summary of the history of the Uganda Protectorate something of interest may be said about the Christian propaganda which has been carried on there since 1877 and the present organisation of the three missionary societies working in the Protectorate.

The whole of the Kingdom or Province of Uganda, with the exception of the little District of Butambala and the suburbs of Mengo and Entebbe, is nominally Christian, the people of this religion belonging to either the Roman or the Anglican Churches. I write "nominally," because no doubt a large number of the peasants still remain pagan in their ideas and beliefs, although ostensibly they have followed their chiefs in a tacit acceptance of Christianity, or, in a very much less degree, of Islam. The accompanying map will show the general distribution of religions in the Protectorate. Elsewhere than in Uganda proper, Christianity has made considerable progress in Toro, and is rapidly conquering much of Unyoro, Ankole, and Busoga. On the other hand, it has absolutely failed to take root in any way whatever in the Kavirondo countries or in a general way throughout the eastern part of the Protectorate and in the Nile Province. In the last-named division no attempts at Christian propaganda have been made as yet since the Austrian Roman Catholic Mission came to complete failure some thirty years ago.

The Anglican Mission under the Church Missionary Society is presided over locally at the present day by the Bishop of Uganda, the Right Rev. Alfred Tucker, D.D. The staff working within the boundaries of the Protectorate was as follows in the beginning of 1901: 22 clergy, 2 medical missionaries, 13 lay missionaries, and 22 ladies attached to the mission as teachers, nurses, etc. This gives a total European staff of 59. The number of stations at which the Church Missionary Society is working is 20. The native Anglican Church working in connection with the Church Missionary Society in Uganda has a staff of 27 clergy, 53 licensed readers, and 2,408 native teachers, male and female. This staff is entirely maintained by the contributions of the native Church. The provinces or districts of the Protectorate in which the missionary work of the Anglican Church is being carried on are the Kingdom of Uganda, the Districts of Unyoro, Toro, Busoga, Ankole, Bukedi, and Elgon.

As regards education, the Anglican Mission has established schools in

connection with its above-enumerated stations, at which children are taught to read and write in their own language. At Mengo and one or two of the higher schools additional instruction is given in English, arithmetic, geography, and other subjects likely to be of use to the more intelligent amongst the pupils. At an average of fifteen schools in 1900, 5,935 boys and 4,776* girls received instruction varying from reading and writing in the native language only, to somewhat advanced instruction in English, arithmetic, geography, etc. During the years from 1899 to 1901 125,737 books (religious and educational) were sold by the Church Missionary Society to natives of the Protectorate at prices amounting in the aggregate to £2,459.

202. THE *WILLIAM MACKINNON* AND THE GOVERNMENT DAU *WINIFRED* AT ENTEBBE

From statistics furnished to me by the Anglican Mission in Uganda, I should estimate that at least 200,000 natives of Uganda and the adjoining districts have been taught to read by this mission since its establishment. At the educational establishments of this mission there have been sold during the same period of two years 7,448 note- and exercise-books and 83,490 sheets of writing-paper. Bishop Tucker states: "Within a comparatively short time it will be possible to supply the Government offices and mercantile community with clerks, interpreters, storekeepers, etc., and the Baganda will be able thus to take their proper place in the administration and commercial life of their country."

Regarding industrial work carried on by the same mission—a work commenced in 1877 by Alexander Mackay, whose name should always be held in reverent and affectionate memory by Europeans and natives of the Protectorate alike—this branch of the mission was specially reorganised under Mr. K. Borup in 1899. At the industrial establishments of the Anglican Mission there are being taught at the present time carpentry, joinery, wood-turning, blacksmith's work, and printing. Those received for

* In 1901 12,363 children of both sexes received instruction.

industrial training vary in age from fifteen to nineteen years. In 1900 the printing department of the mission turned out 100,000 impressions from four printing presses, which are regularly running. A great deal of Government printing work for the political, administrative, and military departments was successfully undertaken. A little paper called *Uganda Notes* is now produced, independently of the mission, at one of the presses, by native printers. It should be added, from my personal knowledge, that instruction in reading and writing is given to the natives, and a good deal of printing is conducted in the following native languages, which have been reduced to writing in the first place by the Anglican and Roman Catholic missionaries: Luganda, Urunyoro (which serves as the common language for the whole of the Western Province), Lusoga, and several distinct dialects and languages in the District of Bukedi. Mr. Borup, at the head of the Industrial Mission, states: "I find the Baganda as apt and quick to learn industrial pursuits as the average boy in England. . . . I should say indeed that they were rather quicker in intelligence than Europeans, were I not afraid of being taken for an enthusiast. To take printing as an instance: after less than two years' training I am able to leave the actual working of the printing office—namely, type-setting, making up pages, locking up forms, correcting after proofs have been read and marked, getting the press ready for printing, distributing type, cutting paper, doing light bookbinding, etc., entirely to the Baganda youths trained in the mission."

An extensive medical work is carried on by the Church Missionary Society in Uganda. A large and admirably appointed hospital has been erected at Mengo, at which in the year 1900 there were 33,983 out-patients and 511 in-patients. The hospital contains sixty-one beds, and its staff consists of Dr. A. R. Cook, B.A., M.D.; Dr. J. H. Cook, M.B., F.R.C.S.; Dr. E. H. Bond, M.D.; an English sister, three qualified English nurses, and five native assistants.

The Roman Church is represented by two missionary societies in the Uganda Protectorate—that of the White Fathers, which is mainly French, and has its headquarters in the regency of Tunis and in Algeria; and the Mill Hill Mission, which is English, and proceeds from the well-known Roman Catholic Missionary College at Mill Hill, Middlesex. The Mission of the White Fathers is presided over in the Uganda Protectorate by Monseigneur Henri Streicher, Bishop of Tabarca and Apostolical Vicar of the Victoria Nyanza.

The first missionaries of the White Fathers entered Uganda in 1879. These missionaries met with a very cordial reception from Mutesa, and were endowed by him with a small property. This mission underwent the same vicissitudes and dangers in the years previous to the institution of the British Protectorate that were undergone by the agents of the Church Missionary Society. In 1894, owing to the more peaceful

203. A MISSIONARY'S HOUSE, UGANDA

state of affairs which commenced, the mission was able to extend its work in the direction of Unyoro, and in the following year to Toro. At the present time its stations are confined to these two districts, and to the greater part of the Kingdom of Uganda. The Mission of the White Fathers had fourteen stations established in 1900, nearly all of them within the Kingdom of Uganda and in the Sese Islands, with two stations in Toro and one in Unyoro. At Rubaga, a suburb of Mengo, there is a conventual establishment for the education of girls. The affairs of the mission are directed in the Uganda Protectorate by a bishop, thirty-seven priests, eight lay brothers, and six sisters.

The French Mission possesses a magnificent stone cathedral at Rubaga (Mengo). All its fourteen stations are built in brick, the bricks having been made by the missionaries themselves, aided by Baganda workers. The stations are surrounded by magnificent gardens producing abundance of fruits and vegetables, in the bestowal of which the missionaries are very generous. It is the effort of the White Fathers to procure from the country itself everything which they need for the maintenance of their mission and for their own sustenance. Thus, alcohol which is required for the dispensary pharmacy and for industrial purposes is distilled by the missionaries themselves from the juice of the banana, whilst they likewise make all the oil they require for their lamps from sesamum seeds.

The mission has founded two principal hospitals, and medical attendance was given to 82,974 patients in 1900. An asylum for lepers has been founded at the principal station of the mission in Buddu, and was occupied by fifteen lepers in 1900. The number of the registered and baptised Christians on the books of the French Mission in 1900 was 50,472. There are stated to be twice as many catechumens who are going through a course of preparation before baptism. Apart from the churches at the fourteen mission stations, there are 412 oratories or chapels maintained by the native adherents of this mission in the villages. Twenty-four schools are maintained by the French Mission in which teaching is given by the Fathers; 2,516 children of both sexes were receiving

education at these schools when the last census was taken. This mission congratulates itself on the success it has recently met with in training native women to be teachers in village schools. These subsidiary centres of instruction given through native teachers are said to amount to as many as 700. There is a kind of native college established at Kisubi, from which important results in education are expected. Teaching is given to pupils of superior intelligence in Latin and in English, in arithmetic and geography. A certain amount of Kiswahili is being taught to those pupils who may be likely to obtain positions as interpreters. A gymnasium has been erected at Kisubi, close to the lake shore. In a canal which is thought to be secure from the attacks of crocodiles or hippopotamuses swimming is taught, and exercise in paddling canoes takes place. On the greens attached to the educational institute at the same place, football, single-stick, and other games are encouraged.

The English Roman Catholic Mission, under the able direction of the Right Rev. Henry Hanlon, D.D., Bishop of Teos and Apostolical Vicar of the Upper Nile, has been too short a time in existence to have been able to produce the results attained by the Anglican and French Missions already described. The Mill Hill Mission is most strongly represented in Busoga, though it has also stations in the eastern part of the Kingdom of Uganda and at the capital, Mengo. The Fathers of this mission are chiefly English, Irish, and Dutch. Bishop Hanlon is entrusted with the education of the two Roman Catholic princes of the Uganda royal family, who stand very near to the throne in line of succession. There is some idea, I believe, of Bishop Hanlon's work being extended in the eastern and central parts of the Protectorate, where at present no attempt has been made to carry on a Christian propaganda.

As regards Islam, its recognised head in the Kingdom of Uganda is the Prince Mbogo, son of Suna, a former king of Uganda, and great-uncle of the little king. In the religious settlement which was commenced by Sir Gerald Portal and terminated by the work of my Special Commission, a district of Uganda (Butambala) was set apart for Muhammadans to settle in (without prejudice to Christians), and its administration is entrusted to one of the recognised chiefs of districts who is a Muhammadan. A large mosque has recently been built at Mengo by Prince Mbogo, and mosques exist elsewhere in the Protectorate where there is any community of Moslems who desire to establish a place of worship. Besides the District of Butambala and suburbs of Mengo and Entebbe in Uganda proper, Muhammadans are chiefly concentrated in the south-eastern division of Ankole, in parts of Busoga and Unyoro, in the vicinity of the River Nile in the Nile Province, and in the country of Latuka.

CHAPTER IX

COMMERCIAL PROSPECTS

TO avoid lengthy titles and adopt plain ones, I have headed this chapter "Commercial Prospects." In reality, however, I cannot help making it a kind of apologia on the whole question of recent political enterprise in Africa. I am only too well aware that the British taxpayer in every class, the earnest philanthropist who repudiates commercial gain as a justification for planting the British flag—the editor of *Truth*, in short, whom the anxious advocate for extending British rule always has in his mind's eye as the person to whom he mentally addresses his justification—are asking now with renewed force whether the statesmen of both parties between 1885 and 1894 did not gravely blunder when they yielded to public sentiment and assumed for Great Britain heavy responsibilities in tropical and unhealthy Africa. These critics point to the wars which have occurred between the British forces and the natives as a proof that our protection was not desired and had to be imposed by force. They single out an individual atrocity as a sample of the white man's daily conduct, and having thus shown the fallacy from the philanthropical point of view of our expensive efforts to administer an area in tropical Africa which equals the united extent of Europe without Russia, they brush aside the question of commercial gain either by declaring it to be non-existent and not likely to come to pass, or by alleging that it is no justification for that shedding of blood which seems to have been inevitable in the founding of these Protectorates. I will deal later with the commercial question. Let me say something on the philanthropic aspect. There is, it is true, also a political justification for some of these Protectorates. Their proximity to places like Aden and Egypt, or their long connection with Indian commerce, might be considered some small measure of justification for the expenditure of money in their acquirement. But this alone would certainly not be sufficient to justify the lengths to which we have gone. I will confine myself, therefore, to the philanthropic and commercial results of this policy, and endeavour to show that they have not been unworthy of the sacrifices made.

Those who read the works of the English, German, and French explorers who travelled at the back of our West African colonies on the Niger, in the Western Sudan, and about Lake Chad down to, let us say, six years ago, must admit that unless one and all of these travellers had been deliberately lying, the bloodshed and misery that went on in these regions was incomparably more awful than the whole sum of "atrocities" inflicted by ill-conducted Europeans, or produced by European warfare with the natives incidental to the extension of European rule over the western third of Africa. I for one, with every desire to be unprejudiced, cannot come to any other conclusion than that the natives of Nigeria have immensely gained in happiness and security of life and property wherever we have undertaken the direct administration and control of the countries in which they live. Those who may desire to realise what the condition of the natives was before British control of some kind was established in Nigeria should especially read the works of Barth, Rohlfs, and Baikie, and the African (Slave Trade) Blue Books from 1866 to 1884: 200, 300 Negroes may have been killed in a war which abolished the bloody rule of Benin, but this abolished *régime* caused the death, often under circumstances of horrible torture, of at least 1,000 negroes per annum, while under this dominion no one but the king or the sorcerer dared to grow rich or had any security that the property accumulated by his industry would remain with him and descend to his children. Visit the rivers of the Niger Delta now and see if you can state with truth that the negroes are not happy, numerous, and commencing to lead a civilised and comfortable life.

Then, again, in British Central Africa. Prior to the effective development of British control continual loss of life was going on amongst the natives. The Arabs and their adherents, the Muhammadan Yaos, traded and raided all through the eastern part of the territory for slaves, this slave-raiding resulting in a very great loss of life, whilst the miseries endured by the slaves on their way to the coast have scarcely, if at all, been exaggerated by travellers like Livingstone. Mlozi, the Arab raider who lost his life in the final struggle at the north end of Lake Nyasa, must have been responsible in his time for the death of something like 10,000 negroes of the surrounding Wankonde tribes. The Arab often killed for the mere lust and joy of killing. His black slaves and soldiers shared his ferocity. Captive women were needlessly murdered in cold blood. Their children were torn from them and thrown into the camp fires or spitted on spears. A large number of boys were mutilated to provide eunuchs for Muhammadan harims. Bands of Zulus who had left South Africa owing to the civil wars in the early part of the nineteenth century established kingdoms which involved perpetual bloodshed in internecine fighting and aggressive attacks on other tribes in the territories west of Lake Nyasa. Portuguese

half-castes of Goanese extraction set themselves up as independent chiefs on the Central Zambezi and slew, with the same ferocity as the Arab, those whom they could not enslave. There was scarcely a wilderness which one crossed in the early days of the British Central Africa Protectorate which did not bear traces, old or recent, of destroyed villages and abandoned plantations, and murdered men and women. To possess a few cattle or to have cultivated a little more corn than was absolutely necessary for the food of one's family was sufficient to draw down on one the attacks of robbers or the pressure of one's own chief. A warlike tribe like the Awemba would devastate the countries round their home over a ring fifty miles broad, and of immense circumference.

If you visit the Kazembe's capital near Lake Mweru at the present day, you will still see a large proportion of the population without hands or without ears, or mutilated in some other fashion, these being the punishments or acts of spite to which the native ruler was chiefly inclined. I should think, until the British Protectorate became effective, five per cent. of the Negro population of these countries was killed every year by the poison ordeal. In most districts there was not a single woman of fifty but had had perhaps ten times in her life to flee into the bush and conceal herself there half-starved, whilst her native village was in the hands of slave-raiders, invading Zulus, or the soldiery of her own chief, who were amusing themselves and their master by a little rapine and shedding of blood. In the wars which were necessary with Arab, Yao, and Zulu to found the British Central Africa Protectorate—wars, it must be remembered, carried on in the main by natives of the Protectorate fighting under our flag—there cannot have been killed from first to last more than 1,500 people on both sides. The subsequent growth of the population is sufficient witness to the gain in human life and happiness which has been purchased by the death of those 1,500 men.

It has been the same in Uganda. If one reads the works of Speke, of Stanley, of the Rev. W. P. Ashe, of Lugard, and Colvile, one realises what a bloody country was the Kingdom of Uganda before it came under British control. The flow of human blood must have been such a common sight as to render the Baganda singularly callous. Speke gives a pathetic account of Mutesa's wives being hurried off to a cruel execution for most trivial reasons, raising their wailing cries of "O my lord, O my master," as they passed him on the way. Sometimes the reasons for these death sentences were that a wife had failed to close the door as she passed out of a courtyard or she had pulled the door to when to do so was a breach of native etiquette. The worship of the spirits in Uganda and Busoga involved constant human sacrifice. At the accession of a new chief in Busoga disgusting mutilations took place of young men and virgins, which

must often have resulted in their death from gangrene or loss of blood. In the countries speaking the speech of Unyoro native custom positively required the suicides of wives on their husbands' graves. But the warfare that took place!—the constant loss of life that was due to civil wars or the aggressions on or by other states; raids from Uganda into Unyoro to obtain extra wives for the chiefs, raids from Unyoro into Toro and Ankole to snatch cattle and seize women; then again, further east, whole tribes wiped out of existence. This has occurred again and again. The population of parts of Kavirondo on the slopes of Mount Elgon, of the Nyando Valley, and of much of the Nandi Plateau has been absolutely extinguished—men, women, and children being slain, and the remnant starving to death in the bush. One can only say that in every district there prevailed absolute insecurity for life or property. There may have been the most carefully framed native laws and customs inflicting on the negro's daily life an amount of etiquette which we should find intolerable; but although these may have secured the law and order of a village, they were no defence against aggression from a rival village, or the downward swoop of some robber tribe who scarcely even felt the common tie of humanity with the peaceful cultivators whose blood they shed with positive enjoyment, whose habitations they laid waste, and whose cattle they stole. Famines, epidemics of smallpox or of bubonic plague, attacks of a virulent dysentery caused by bad water and semi-starvation, would slay here 6,000, here 10,000, elsewhere wipe out a whole nation. The cattle plague would come down from the north, and since there was no central Government to check it or to segregate infected herds, disease would wipe off all the cattle from a country as large as Wales, reducing its inhabitants, who had hitherto depended solely on the produce of their cattle, sheep, and goats, to starvation or a disastrous emigration.

As regards famines, I may be told that British rule in India has of late been coincident with terrible famines. This is true: but the people who put this forward do not stop to inquire how bad the famine would have been if there were no British Government, or whether the famine could ever have taken place but for the enormous and unchecked increase of population which has taken place under British rule, whereby India possesses almost more inhabitants than she can support. As regards Uganda and Busoga and the countries to the north of Mount Elgon, where famine has occurred since our acquaintance with those countries, it has been of a kind which will be henceforth certainly preventable under a well-organised Administration. Warfare and the deflection of cultivators to unprofitable fighting was one reason. Partial failure of rain was another; but this last would have been of but little effect if the natives had been taught to irrigate their fields from streams which never fail.

Freedom of religion has certainly been one result of a British Administration in Uganda. A man may now be Catholic or Protestant, Muhammadan or pagan, without fear of his life or without loss of his property. I am honestly convinced, and so I think would be any unprejudiced observer, that so far as happiness of the natives goes, our Protectorate over Uganda has been justified, as it has been elsewhere in Africa.

It is not within my province to pronounce on the work of other nations on the same lines. I should certainly say that the condition of Tunis, Senegal, and Dahome under the French was a hundred times better than the state of those countries when entirely left to the devices of native rulers. Here and there a native of Unyamwezi may feel the heavy hand of a German sergeant; but the people know, at any rate, that as long as they pay their taxes and obey the law their lives and property are secure. But I feel we have quite enough to do to look after our own possessions and spheres of influence in Africa without turning aside to criticise the work of other nations. Until we are sure that not a fault, not an error of judgment, remains in our own rule, that there is not a thing left undone that ought to be done, we may save ourselves the waste of time and energy involved in trying to show how badly the French, Germans, Belgians, Italians, and Portuguese manage their possessions. Let their work be judged eventually by its results. If the results are good, then the work cannot have been wholly bad. If all these nations are treating the natives abominably, or, as is sometimes complained of the French in Senegal, with mistaken kindness, then no doubt the expensive failure of their efforts will be sufficient punishment to the countries at fault. We have at any rate secured a sufficient share of Africa in which to put our own philanthropic theories in practice, and above all in which to give our commerce absolutely free play.

In theory I maintain that inasmuch as we entered upon the assumption of Protectorates over East and Central Africa mainly in the interests of the natives, to put down the slave trade, and in the case of some countries to establish British protection at the natives' request, in preference to allowing them to come under the sphere of another Power; as the immediate outcome of these Protectorates is of benefit principally to their Negro inhabitants, it is to the natives that we should look in the first instance to provide according to their means the funds necessary to maintain an economical but effective Administration. If every adult male native in these Protectorates paid 8*s.* a year in taxation, there would be little, if any, need to resort to the Treasury of the United Kingdom for funds to supplement the cost of administration. There

would also be no cause for the British taxpayer to complain if coffee or rubber, gold or ivory, or all these substances combined, failed to provide a lucrative commerce for the British market. The Protectorate would then be administered purely in the interests of the black man. He at least, in the climate of the country wherein he was born, does not suffer from the diseases which afflict the European who attempts to settle in parts of tropical Africa; he at least is happy and content if he can maintain flocks and herds of cattle, sheep, and goats, and grow food-stuffs suited to his country and his palate. But the native in many cases has no cash with which to pay his taxes. He can only earn the money by working, say, for a month, or by collecting and selling rubber, coffee, or some other saleable substance which he can acquire without robbing other people; or he may breed cattle for the provision market, or collect oil which is sufficiently valuable to meet the cost of transport to the European markets.

But do these countries of Uganda produce substances of sufficient value to induce the European or Asiatic trader to buy them from the natives or to cultivate them on his own account by means of paid native labour? If they do, then again the question of equilibrium in the Protectorate finances is ultimately decided. Supposing for a moment, however, that coffee is ultimately to be a failure in British Central Africa,* or that the existence of coffee, cacao, ivory, oil-seeds, hides, and live-stock in moderate quantities in Uganda is not sufficient to maintain a large and profitable commerce, is there no other way by which the natives of these Protectorates may prosper, make money, and, with far less sacrifice than the average inhabitant of European countries, support their own local Administration? There is, I believe, a method which, properly regulated, might be productive of most beneficial results. In Africa south of the Zambezi there exists an enormous demand for Negro labour, especially in countries where climatic and other conditions make it impossible to use white men. If between the Zambezi and the Nile there exist millions of black men by no means wanting in enterprise, by no means fearing long journeys, anxious to obtain a little money, yet anxious not permanently to leave their homes; between the Zambezi and the Orange River there are European capitalists ready to use any amount of Negro labour at good rates of pay for the development of the mines and of other enterprises in which the white labourer, for climatic and other reasons, is an impossibility. It does really seem desirable in the general interests of Africa that the agents of the demand and the supply should be brought together.

It may be asked why, inasmuch as there is a Negro population in the

* I think no such thing.

South African colonies of perhaps 3,000,000 or more, the men of these Zulu, Basuto, Bechuana, and Matabele races do not themselves provide all the Negro labour that is necessary for the development of British South Africa up to the Zambezi. The reply to this would be, I suppose, that a good many of the young men do go to work in the mines north of the Orange River; while hundreds of thousands of others find work as drivers, teamsters, labourers, domestic servants, policemen, etc. Also it might be said that as all these natives pay the taxes levied on them and maintain themselves in a lawful manner, it is nobody's business what they do with their spare time. In the same way, if every native of the Eastern African Protectorates paid his taxes in money and obtained his food and lodging in due observance of the laws, it would be a matter entirely for his own consideration whether he was to earn anything in excess of these requirements: he and his congeners having each paid their yearly tax, the Protectorate they lived in would be independent of a British subsidy, and at the very worst would be maintained without cost to the Imperial Government for the benefit of the Negro inhabitants whose taxes supported it.

But the fact remains that the Negro races of *South* Africa, though acquitting themselves of all liability in the way of taxation, and working sufficiently to obtain the food, lodging, and simple luxuries they require, do not suffice as a labour force for the complete development of the regions between the Orange River and the Zambezi, an additional reason for this being probably that, owing to their much more advanced condition of well-being, they require wages far in excess of Central African natives, whose labour, because less skilled, is not rated so highly. Many an enterprise in Rhodesia, or in the Transvaal, or in Bechuanaland might be worked at a profitable rate and with results more beneficial to the country if a supply of cheap native labour could be obtained from Central Africa; yet the cheap rates paid for this labour would seem a little fortune to the negro from Nyasaland, Tanganyika, or Uganda. In short, the gigantic enterprises of Europeans in South Africa should contribute in a very material degree to the support of the East and Central African Protectorates, into which should flow for their local enrichment a fair proportion of the vast sums of money expended daily south of the Zambezi.

I know at first sight that certain people in England, keenly interested in the welfare of the Negro, and whose interest may sometimes border on sentimentality, will exclaim that the theory I am propounding of turning Central African labour into undeveloped South Africa, and South African money into unhealthy Central Africa, is but a disguised revival of slavery. A little reflection, however, will convince the really honest Negrophils that this is not the case. A class of missionary now nearly extinct was bitterly opposed to the enterprise of non-missionary Europeans in Central Africa,

and to any steps which might result in the Central Africans leaving their homes to go far afield for employment. This type of thinker, narrow if earnest, would have preferred that the Central African native should remain in modified savagery, without any wants or tastes than those which could be met by the simple instruction and pleasures of the mission station. This class of missionary did not realise that his work, his noble calling, was a preparatory one; that the pupils he had taught must take certain risks and go far afield if the race he was teaching were really to benefit by the introduction of Christian civilisation. These missionaries, if any of them still survive with unchanged views, would have been opposed to the people of British Central Africa going to Rhodesia, to the natives of Uganda visiting the East African coast or Zanzibar. They would have preferred their converts to attain old age in the natal village with no knowledge of the outer world, in the fear lest by travel they should escape the influence of the particular mission which had reared them. But the work of the Lovedale College in South Africa, of the Universities' Mission, the Free Church Mission, and the Church Missionary Society, all of which bodies send their pupils far and wide, is probably overcoming such prejudices. Adherents of the Church Missionary Society who may have been taught at Sierra Leone or in the Niger Delta are now at work on Lake Chad. Men of Lovedale College have made their mark as teachers of fellow-negroes on Lake Nyasa.

What possible objection can the real philanthropist—the man who is no faddist, but genuinely desires the upraising of the black races—find in the intercourse between South and Central Africa? Provided that the native of Central Africa be ensured absolutely good and fair treatment, and a short term of service is rigidly adhered to, what reasonable objection can be taken to this interchange of labour and capital? In the days when the journey from Uganda to the Indian Ocean was three months' tramp over unhealthy country and sterile desert, it would have been undoubtedly absurd to advocate Baganda workers proceeding to South Africa; and in like manner, when the lands north and south of the River Zambezi were ravaged by Arab, Goanese, and Zulu slave-raiders, it would have been criminal to suggest that a body of unarmed men should have left the west coast of Lake Nyasa to march to Buluwayo. But since all these journeys now can be made with safety and celerity and under good health conditions, provided that absolute security exists for the fair and humane treatment of Negro workers in South Africa, I can only see that real good would result by this filling up of the labour market in South Africa from the Protectorates north of the Zambezi.

A minimum rate of wages should be fixed which shall ensure to the native of Central Africa a reasonable return for his trouble and displace-

ment. The term of service should be at first limited to one year, with obligatory repatriation at the expense of the employer; all wages to be paid in British money, in cash, not in trade goods; medical attendance to be furnished by the employer; and lastly a "Protector of Negro Immigrants" to be appointed at the headquarters of each important district to hear and redress grievances. Sunday should be insisted on as an absolute day of rest, on which the immigrants, if of the Christian religion, may be able to attend to their religious exercises, and missionaries of the faith to which they belong should not be discouraged in communicating with them. For Muhammadans the day of rest might be Friday. It must be remembered that natives from most of the districts of the Uganda Protectorate and East Africa, and from all British Central Africa, would not find themselves in a very strange country when crossing the Zambezi, for the Negroes native to all that part of Africa would speak languages so closely akin to those spoken by the people who had come from these northern regions that in a few weeks they would be able to understand one another.

No compulsion should be exercised in the Protectorates to oblige Negroes to go so far afield for employment, but on the other hand the local Administrations need do nothing to *discourage* the natives of the country they administer from proceeding to British South Africa under proper guarantees and for reasonably short spaces of time. It is, of course, to the interests of these Protectorates that repatriation should be insisted on, so that the native of Uganda, of Nyasa, or of East Africa may duly return to his home and the support of his family and his Government.

Perhaps capitalists in South Africa may be permitted under proper guarantees to make preliminary experiments, to recruit small bands of labourers in the Protectorates mentioned for a period of service not more than one year south of the Zambezi. I am convinced that if the men thus recruited returned in good health to their homes with their wages honestly paid them in good money, and with tales of all the wonderful things they had seen, the difficulty henceforth would be to restrain and not to encourage the emigration of Negro labourers to the South African dominions for temporary employment.

In the early days of the East African Protectorates regulations were drawn up—and very properly so—to control and even to hinder the expatriation of the natives of these Protectorates, since the administrative authorities were dissatisfied with the way in which the subjects of these Protectorates were treated in adjoining African countries. These regulations would have to be modified to some degree to permit of the recruiting of the natives of Eastern and Central Africa for work in British South Africa; but I assume that these facilities for the transfer of labour from tropical

Africa to the regions south of the Zambezi would not be given until the Imperial Government had satisfied itself that absolutely satisfactory arrangements had been made in South Africa for the protection of these immigrants and for their repatriation at the end of their term of service. The movements of British-protected subjects would only take place between British colonies and Protectorates, and the existing regulations would remain strictly in force as regards those parts of Africa not under the British flag, unless, indeed, later on arrangements of a similar nature for the protection and repatriation of these workers were made in the possessions of other European Powers, and His Majesty's Government were satisfied that in allowing British-protected subjects to proceed to French, German, Italian, Portuguese, or Belgian territory satisfactory security would be obtained for their good treatment and punctual repatriation.*

And now with regard to the commercial prospects of the Uganda Protectorate.

Amongst the extensive collections of rocks and minerals which were made by my expedition, or on its behalf by officials of the Uganda Protectorate, only one amongst all the specimens of quartz shows any signs of gold. On the other hand, specimens of rocks from Unyoro (as will be seen in Chapter X.) would seem to indicate a formation in that district analogous to the gold-reef rocks of the Transvaal. The country abounds in hæmatite iron, and in ordinary iron ore; there are graphite or plumbago mines, and there is perhaps a little copper. Some of the rock specimens collected by Mr. F. W. Isaac in the Baringo District indicate the possibility of precious stones existing in these formations. Salt of very good quality is obtained from the salt lakes, which have become the property of the

* Colleagues who have been kind enough to furnish me with their opinion of the reasons for and against the East and Central African natives proceeding to British South Africa for employment seem to think that the only criticisms which can be made of the treatment of Negro labourers in Rhodesia at the present time are the following: All these negroes strongly object to the compound system—namely, that by which they are massed in prison-like barracks instead of being allowed to live each man in his own little hut—and the excessively hard work which they have to perform at times. They none of them complain of ill-treatment, or of being treated other than quite justly regarding their pay, rations, and clothing. Their idea seems to be that they would not object to this service if they worked continuously but less hardly. The system at present seems to be that considerable periods of inaction alternate with "shifts" of excessively hard work. The Central African Negroes would prefer, if it could be arranged, to work continuously during their term of service, but not under such severe stress as is occasionally applied to them. They strongly object to the prison-like life of the compounds, and would prefer to be allowed to build small huts of their own. If these huts were not too close together, and if vaccination were rigorously insisted on, I do not think that the objections held in regard to a separate hut system could be maintained.

British Government, in the District of Toro, in Western Unyoro, and also on Kavirondo Bay. Whether this salt would be worth exportation is a matter of doubt, but it circulates throughout a good deal of Central Africa as a valuable article of barter. It, therefore, has an intrinsic value as a source of revenue to the State. Broadly speaking, however, at the present time no absolute discovery of unquestioned mineral wealth has been made in the Uganda Protectorate; though it must always be remembered that Africa is the continent of surprises, and Uganda may yet be found to contain payable gold which, with the aid of railway and steamer transport,

204. "COMPANIONS IN CAPTIVITY": YOUNG ELEPHANT AND ZEBRA AT ENTEBBE

can be worked at a profitable rate. Since, however, we can only deal with known assets, we must at present look to the development of a really prosperous commerce by means of animal and vegetable productions.

As regards animal productions, there is ivory of the very best quality. So long as the British Government can determinedly enforce the Game Regulations by a small annual expenditure, and protect female and immature male elephants from being killed by natives or Europeans, there will not be much danger of the African elephant becoming extinct in a territory so large as this, where Nature has reserved vast marshes and leagues of

forest for the shelter of this beast. Provided the most religious care—such care is effectual in India—was taken of the females and young, there is no reason why a certain number of male elephants should not be killed yearly by designated agents of the Government, and their ivory be sold to merchants as part of the Protectorate revenues. I see no reason whatever now why the female African elephant should not be tamed and used as a transport animal. For this purpose it might eventually prove advisable to import trained Indian females, who might assist in teaching the young captured Africans. The experiments I have tried myself in the way of rearing baby elephants who had not yet been weaned from their mothers proved unsuccessful, as apparently it is impossible to rear any African elephant on cows' milk. Perhaps, however, my four failures in this respect need not be held to discourage other experiments. In any case, the late Mr. Richard Baile showed that it was possible for natives to capture young elephants able to subsist on leaves and grass, yet not so old as to be utterly unmanageable or untamable. It may be along this line that the next experiments will be made, and imported female Indian elephants might be of use in taming the newly captured elephants. In time, when African elephants had been trained to keddah work, the whole system of capturing, taming, and training elephants might be conducted on Indian lines. If after many years of trial the African elephant is pronounced to be hopeless as a domestic animal (and it should be remembered that most *male* African elephants in captivity have shown themselves to be hopelessly savage), *then at least for its magnificent ivory* the creature is worth preserving as an asset to the State. If the Indian elephant shows himself to be more docile than the African elephant, it must be remembered, on the other hand, that he is of very little value for his ivory.

Zebras of two kinds (the magnificent *Grévyi* and the equally handsome but smaller Grant's zebra) exist in the Uganda Protectorate in countless swarms. The foals are easily captured by the natives, and can be reared by means of asses as foster-mothers, the ass being one of the commonest and cheapest of domestic animals, at any rate over the eastern parts of the Uganda Protectorate. These fine large asses, in fact (which are simply the Nubian ass slightly domesticated), might of themselves be an article of export.

Giraffes and most of the larger African antelopes should be strictly preserved, but when they increased unduly in numbers specimens of them might be captured for sale and transmission to zoological gardens. Where any of these animals are really found in excess, and have to be thinned, it must be remembered that their hides are almost always of value commercially.

Either there is no true tsetse fly anywhere in the Uganda Protectorate or it is not able to obtain and introduce into the bodies of domestic animals

the malarial germs which cause tsetse fever. Therefore, theoretically there is no part of the Uganda Protectorate in which cattle, sheep, goats, and horses cannot be kept. But although the Protectorate is fairly well supplied with fine cattle, and possesses enormous herds of sheep and goats, it must be remembered that at different periods during the past twenty years portions of the Protectorate have been visited to a disastrous extent by a cattle disease—some kind of pleuro-pneumonia coming from the Dinka countries in the Egyptian Sudan, and gradually spreading right down to South Africa and across the continent to Sierra Leone. Some portions of the Uganda Protectorate, however, have never been ravaged by this disease. It should also be possible perhaps to attack the malady at its source in the Dinka countries, and eventually put a stop to these ravages, which have inflicted such appalling losses on East and South Africa. At any rate, at the present time Uganda has enough cattle to be able to export beasts by means of the Uganda Railway for consumption in the markets of East Africa. If cattle-breeding prospers and remains untouched by any further disease of a serious nature, the export of hides from Uganda ought to amount to a very considerable item in its commerce.

The ostrich of the North African species, with fine white plumes in the male, is a native of the northern and eastern districts of the Uganda Protectorate. Its eggs and recently hatched young are constantly brought in by the natives for sale. There is no reason why, in the Rift Valley and over the greater part of Uganda, ostrich farms should not be established. It is possible that the feathers of the North African ostrich might average slightly more in the market than those of the South African species.

Honey bees exist over the greater part of the Protectorate, and in many districts are partially domesticated by the natives, to whom honey is an important article of diet. The wax of these bees would certainly form in time an article for export.

Turning to vegetable productions, we have, in the first place, coffee. Whether originally introduced or not from Abyssinia, coffee is at any rate native now in a semi-wild form to the better forested regions of the Uganda Protectorate, its berries producing coffee of excellent flavour. Not only might the wild coffee be gathered and sold by the natives, but it would seem as though this country was singularly well adapted for coffee plantations, as the forested regions have a regular and ample rainfall, the soil is very rich, and abundance of shade trees exist. Coffee could be grown on the lake shore all round the northern half of the Victoria Nyanza. Steamers could carry the coffee to the railway terminus on Kavirondo Bay, and it is probable that by steamer and rail, and steamer again from Mombasa, coffee could be landed at the European markets charged with a freight of not more

than £2 10s. a ton. On the other hand, I am not certain whether Uganda would produce the local labour for the coffee plantations as cheap as that which would be obtained in British Central Africa. Perhaps on the whole the advantages of the two Protectorates for coffee-planting are about equal.

Regarding the soil of Uganda proper and the adjoining Districts of Busoga and Toro, Mr. Alexander Whyte says: "Generally speaking, this soil is a reddish loam on a subsoil of rich red or chocolate clay, sometimes of a great depth. At times patches of poor, gravelly soil crop up, more especially on the hilltops. These are formed of disintegrated ironstone or igneous rock, and do not retain the moisture. The country is wonderfully free from surface stones and boulders. . . . The soil of the swamps and marshes is a black humus, formed by the decay of rank vegetation. One would naturally expect to find a deep deposit of this, mixed with soil washed down from the surrounding hills; on the contrary, I have been surprised to find this black deposit often very shallow and almost invariably overlaying a subsoil of kaolin clay. . . . The question generally put is, What will not grow and flourish in Uganda? The furze and the broom grow so well that we are making hedges of them. Tomatoes grow quite wild. One plant was left by the boys when weeding my compound. It flourished so amazingly that I determined to keep tally of the fruits picked from it. The yield in two months has been 3,000! It still goes on bearing clusters of lovely fruits, and covers a space of twenty feet square."

I give here a photograph of a sunflower in the Botanical Gardens at Entebbe which grew up in a few weeks, and produced more than 200 blossoms, all of them yielding seed full of excellent oil.

Oats thrive well on lofty regions like the Nandi Plateau. Up to the present time wheat in Uganda has not been a great success. Inasmuch, however, as it has proved a success in German East Africa to the south of the lake, our comparative failure probably means that we did not select the right kind of wheat for the very varying altitudes of the Uganda Protectorate. As to Indian corn, sorghum, millet, eleusine, and other grains native to Africa or India, they flourish exceedingly, and are at any rate excellent and sustaining food for the natives.

The sesamum and ground-nut grow in many districts, and could be converted locally into an oil of considerable commercial value. The fibre of the raphia palm, of three or four species of *Hibiscus*, and of the *Sanseviera* might be worth exporting. The Baganda make excellent ropes out of locally produced fibre. Tobacco grows almost everywhere in Uganda, but whether it could possibly compete with the tobaccos of the West Indies, India, and Borneo is doubtful. But it forms a very notable object of sale and barter amongst the natives, being eagerly purchased from

those who have it by those in whose districts it is not cultivated. Indeed, in making journeys to a distant part of the Protectorate one is obliged to take tobacco as one would cloth and beads. The sugar-cane grows luxuriantly in all the tropical parts of the Protectorate, and already steps have been taken to obtain from it a sugar which should at any rate suffice for the inhabitants of Uganda. Mr. Whyte considers many portions

205. A SUNFLOWER WITH NEARLY 300 BLOSSOMS ON IT AT ENTEBBE

of the Protectorate admirably adapted for the cultivation of tea and cacao, the last-named plant having, through the efforts of Sir W. Thiselton Dyer and Mr. Whyte, been successfully introduced into the Uganda Protectorate. Cotton grows wild in Uganda, but, like tobacco, might possibly not be worth exportation.

Amongst the commercial assets of Uganda timber must certainly not be overlooked. The forests of the Mau and Nandi Plateaux and of the slopes of Mount Elgon contain hundreds of thousands of magnificent

conifers—juniper and yew. The timber of the juniper is to all intents and purposes like cedar-wood. The mere thinning of these woods which is necessary for their improvement, and which might be carried on concurrently with the establishment of European settlements, would provide millions of cubic feet of timber, which would find a ready market on the east coast of Africa. In the tropical forests along the shores and on the islands of the Victoria Nyanza all the best African trees exist—ebony, African teak, African mahagony, iron-wood, and acacia. It has been considered that without detriment to the forests along the Uganda Railway or in these lacustrine districts wood fuel could be used instead of coal, resulting thereby in an enormous saving in the working expenses of steamers and locomotives.

We come now to what I believe to be the production of the surest value in the Uganda Protectorate: indiarubber. Mr. Whyte is of opinion that a tree of an allied species to the gutta-percha of Eastern Asia grows in Buddu, and perhaps elsewhere in the forest-covered regions of the Protectorate. Unfortunately, the specimens collected to prove this statement have never reached their destination at Kew. But rubber of a very saleable quality is produced by two or more trees of the genus *Tabernæmontana*, by perhaps three species of *Landolphia*, and by a *Funtumia*. The rubber produced from these sources varies in value according to the care with which it has been collected. The samples which I have had sold experimentally of Uganda rubbers have ranged in price from 1*s*. 1*d*. to 2*s*. 6*d*. a pound. The bulk of Uganda rubbers as at present turned out by the natives seems to realise about 2*s*. a pound when sold at Mombasa. Steps are being taken to properly instruct the natives in the best methods of procuring and preparing rubber for the market, and it is to be hoped that as a result not only no permanent harm will be done to the sources of rubber supply, but the purity of the Uganda rubbers may be well maintained, and secure for this article an average price of at least 2*s*. a pound.

The following summary of the animal, vegetable, and mineral products known to exist in the Uganda Protectorate, and likely to be of value in its commercial development, is appended. It should be pointed out that although in some instances the product may not be worth the cost of exportation to compete with the products of other countries in the *European* markets, it is of considerable local value. For instance, it might not pay to export Uganda sugar, but it will certainly pay—is paying—those people who have sufficient enterprise to turn the sugar-cane of Uganda into a crystallised sugar which is eagerly bought by Europeans, Indians, and natives, inasmuch as it can be sold to them at cheaper rates than sugar imported from abroad. The same thing would

apply to cotton, salt, tobacco, and not a few of the substances included in the following list.

Elephant ivory, hippopotamus teeth.
Skins of lions, leopards, wild-cats, and other animals possessing handsome fur, and not on the Protected List.
Hides (oxen, sheep, goats', and wild animals' not on the Protected List).
Live-stock (cattle, sheep, goats, asses, and wild animals and birds of interest to zoological collections).
Beeswax.
Coffee.
Indiarubber of four or five kinds.
Sugar.
Tobacco.
Cotton.
Fibre of many kinds, some especially suitable for rope-making.
Timber (juniper, yew, ebony, African teak, African mahogany, acacia-wood, red-wood, bamboo, iron-wood, etc.).
Dye woods.
Drugs (*Strophanthus*, etc.).
Gums (acacia, copal, incense, shellac).
Grain (maize, sorghum, millet, eleusine).
Food-stuffs of a not too quickly perishable nature, such as potatoes, beans, peas, dhal.
Oil-seeds (ground-nuts, sesamum, castor-oil).
Cardamoms, turmeric, and other substances used in the East as spice.
Chillies.
Food-stuffs which might be properly cultivated in the Uganda Protectorate and eventually for export: Wheat, oats, rice, coffee, tea, cacao.
Minerals: Gold (?), iron, plumbago, salt.

Uganda contains limestone in the Nyando Valley, and in many parts of the Protectorate excellent building stone; and brick-making, pottery, and porcelain clays.

At the time of writing, British trade—that is to say, commerce conducted by natives of the United Kingdom—is by no means to the fore in the Uganda Protectorate. The firms of Smith, Mackenzie & Co. and Boustead Ridley were both until recently established in Uganda. Both have to a great extent withdrawn owing to the difficulties of transport, and in some cases to a series of unlooked-for misfortunes. These and other British firms, in fact, have decided to hold their hands and restrain their enterprise until the completion of the railway and the placing of capacious steamers on the Victoria Nyanza. Whether they are wise or not in awaiting events I cannot say. Meantime two German firms are pushing ahead in all directions. One of these is the German East Africa Company. I understand that both the German firms are either subsidised by their own Government or by the German Colonial Society, and that this help enables them to create and carry on an extensive trade in Uganda regardless of present profits or losses.

The result has, I must admit, been most beneficial to the European officials, who are not too well paid. Thanks to the enterprise of the German firms, stores were opened at Entebbe, Mengo, Fort Portal, and other places even before the railway cheapened commerce and transport, and at these stores a great variety of European goods can be purchased. The Germans have been selling excellent wine, whiskies, groceries, and most of the necessities of European life at prices which were certainly reasonable for the time and place. In fact, it really made existence possible for the official, who before this German enterprise either had to live on native food or get into debt by purchasing provisions and wine in England and having them sent up-country from Mombasa at a ruinous rate of transport and subject to innumerable risks and incredible delays.

Almost simultaneously with the German came the British Indian. He rendered further benefits to the European community by bringing down the German prices, and by opening stores at places whither even a German hesitated to penetrate. Within the term of my Special Commission, Indian traders advanced their posts from Kampala (Mengo) to Toro and the vicinity of the Congo Free State, to five places in Unyoro, and all the posts at which Europeans or native soldiers were established in the Nile Province, besides opening bazaars at all the stations in the eastern half of the Protectorate. This commercial enterprise of the Germans and British Indians, of course, added largely to our local revenues, and did a great deal to encourage the natives to embark in trade in the products of their country. To the British Indians I can only wish unlimited success, since they trade under the British flag, and create trade, first in a small way and then in a large way, where no trade has hitherto existed. To the Germans, out of gratitude for their belief in Uganda and for the comfort which they have added to the life of the European official by the opening of good shops with provisions sold at reasonable prices, we can only wish success, since all trade in Uganda must conduce to the prosperity of the Protectorate and the increase of its revenues.

In addition to Germans and British Indians, there came to trade in this Protectorate Persians, Somalis, one or two Greeks, several Armenians, and one Italian. A Persian has opened a soda-water factory at Entebbe. A native of Kach in British India is erecting hotels for British visitors at the principal stations on the Uganda Railway and elsewhere in the Protectorate.

With regard to the Germans and to the Indians, they appeal to my liking as a Government official because they give little or no bother; they ask for no guarantee and for no concession. They enter the country and pursue their trade under the laws in force, making the best of things as they find them. In the case of British firms, I am bound to admit that they are somewhat apt to ask for guarantees, for assured contracts, for concessions

of land or monopolies of production, before they are able to venture their capital and enterprise. I am quite of opinion that in some districts, in some directions, special steps should be taken to induce law-abiding Europeans

206. A RUBBER-TREE (*TABERNÆMONTANA*)

of all nationalities to engage in industrial enterprises. At the same time, so far as my own opinion goes, I am quite opposed to the handing over of large concessions or estates to companies or associations who have given no proof of their ability to develop these, who will probably only use them as counters

with which to speculate on the Stock Exchange, and who are likely to override roughly existing native rights and industries. I earnestly hope that our Government may share these views to a reasonable extent. At any rate, until, say, ten or fifteen years hence, we find that the natives of the Uganda Protectorate are hopeless, that they will do absolutely nothing to develop under our direction and for their profit the resources of the country in animal, vegetable, and mineral wealth—until then I consider we ought to be most careful not to repeat a policy which has been shown to be disastrous in the Congo Free State and in certain French colonies.

Commerce ought to be absolutely free and unrestricted in the Uganda Protectorate. If the native profits by developing the resources of his country, the Administration of the Protectorate will profit also; for the native will have money with which to pay his hut and gun taxes, the export duty on certain goods, or the import duty on others. The European merchant will find his gain in the cheapness of native labour, and consequently the low price of the native products which will be tendered to him for purchase. But do not let us—at any rate, until we have tried other expedients and failed—hand over large districts as exclusive concessions to this or that company for rubber, timber, ivory, or coffee. Special arrangements in regard to mining may possibly have to be made owing to the utter inability of the native to develop that particular source of wealth. At the present time any European or foreigner (or, for the matter of that, any native) can purchase from the Crown an estate of 1,000 acres in any one place, provided such estate be the property of the Crown and not of a native or natives, and unless it contains an amount or special patch of forest which for good reasons the Government may not wish to sell. Therefore there is no hindrance in the way of modest enterprise. At to *im*modest enterprise—a single association buying up a whole province or obtaining an exclusive rubber concession over 25,000 square miles—I for one am totally opposed to any such policy—at any rate, until it has been shown that a mass of small traders and 4,000,000 natives cannot between them develop the resources of their country in a manner productive of profit and happiness to all.

The British taxpayer has had to pay for the establishment of the Protectorate over Uganda since 1894 about £1,394,000, and £4,900,000 for the construction of the Uganda Railway. For ten years to come he will have to pay, let us say, another £2,200,000 for the maintenance of the Uganda Railway until its revenue makes it a self-supporting concern, and a yearly contribution to the revenues of the Protectorate to meet the deficit between the revenue and expenditure, which will not entirely cease to exist, let us suppose, for another ten years. This means that the

207. THE WHITE MAN'S COUNTRY: NANDI PLATEAU, EASTERN PROVINCE

British public will have invested a total sum of (in round numbers) £8,500,000 in the Uganda Protectorate, besides about £2,000,000 between 1894 and 1911 in the adjoining East African Protectorate, expenditure on which is closely bound up with that on Uganda.

What return is the native of the United Kingdom to get for this investment of £10,500,000 sterling? I have, of course, pointed out that we commenced these Protectorates from motives (Continental nations may laugh, but it is true) of pure philanthropy. Since those days, however, of enthusiasm for the suppression of the slave trade and the general betterment of the black man's condition, the same nation, or only that core of it, the United Kingdom, has been mulcted of £100,000,000, £200,000,000 to dissolve the inimical Dutch element in South Africa and to create a firmly established, free, and self-governing state of enormous proportions between the Cape of Good Hope and . . . and . . . what?—Tanganyika? The British public, therefore—I mean the taxpayers in Great Britain and Ireland—may have grown weary of such expensive philanthropy, and may ask with considerable justification, "May not this money of mine spent on the African Protectorates be considered as an advance towards the creation of great Negro states, be regarded as the national debt of those states, and be ultimately repaid out of their revenues? And am I to get no other return for this venture of my capital, this expenditure from my pocket?"

As a British taxpayer, I certainly feel entitled to put this query myself, and I should like it answered eventually by the consolidation of this theoretical advance of £10,500,000 into a national debt which the East African territories should seek to repay by instalments and by degrees to the mother country. Supposing that the British had spent £10,000,000 in the original annexation of the Transvaal in 1877, and in the erection of the Transvaal into a prosperous, well-governed state, with no break of twenty years following Majuba. What an easy matter it would have been for the Transvaal, with the discovery of its enormous mineral wealth, to have repaid to the taxpayers of the United Kingdom the £10,000,000 expended in the creation of this prosperous colony. It is the unexpected which always happens in Africa. The territories I am now describing, or those adjoining them under the British flag, may turn out to be amazingly wealthy in gold, in precious stones, or in some vegetable product of immense value to mankind. If such circumstances arose, I consider that these territories should certainly be called upon to repay to the Treasury of Great Britain the £10,500,000 or more which it will have cost to erect them into a well-governed state, with a revenue which meets its expenditure.

And as a further reward to the British taxpayer, I consider that "all that valuable demesne" on the Nandi Plateau which is adapted by nature to be a

A Landscape on the Mau plateau.

White Man's Colony should (with forest and game reservations excepted) be surveyed, divided into estates of moderate size, and thrown open to settlement at the hands of natives of the United Kingdom, or—failing a sufficient number of applicants from England, Scotland, and Ireland—to the natives of the British Empire, perhaps on slightly less liberal terms, since they have not contributed to the original expenditure. No law or regulation need be issued in this sense to horrify doctrinaire adherents of Free Trade or of that present lack of Imperial organisation by which the 40,000,000 inhabitants of the United Kingdom meet the entire cost and responsibility of creating, extending, and defending the Empire; but spoken instructions might be conveyed to the local authorities in the consideration of claims for free estates to favour, in the first instance, applicants who have been taxpayers in the United Kingdom. The map on which the density of population and the existing European settlements are given shows the approximate area of this territory which I call the White Man's Colony. Over the greater part of this extent there is not a single *settled* native inhabitant, no one in the shape of a black man but a few wandering hunters. Consequently we are committing no act of injustice towards an indigenous population in offering this land to the British settler. We are offering him in this direction a country with a climate as healthy as that of the temperate parts of South Africa, of Southern Australia, of New Zealand; a land abundantly watered by running streams, with grassy downs, splendid forests of conifers, a fertile soil, and a country which, though exactly under the equator, is singularly like the landscapes of southern England—landscapes that are decked with wild-flowers closely resembling those that grow in the English meadows and hedgerows; a land wherein it is never too hot in the daytime, though sometimes there is a frost at night; where there is heavy rain and (where the forest is too thick) too much humidity; where the wind is sometimes keen; where the lion, the leopard, the wild-cat, and the hyæna may for a time exact a toll from the settler's flocks; where there will be unlooked-for disappointments in the third year's crops, or where an unexpected disease may diminish the tenth year's output of potatoes; yet on the whole one of the fairest countries for beauty on the habitable earth, and a tract of land which, if it lay within the limits of Australia or a South African colony, would maintain a prosperous European population of 500,000 souls.

CHAPTER X

METEOROLOGY AND GEOLOGY

IN the consideration of climate and temperature the Uganda Protectorate may be divided into five regions:—

(1) There is the extremely arid country at the relatively low altitude of 1,500 or 1,600 feet above sea level that stretches from near the north end of Lake Baringo to the north end of Lake Rudolf, and includes the basin of that lake and the surroundings of Lake Sugota. Here there is often considerable variation between the highest day and the lowest night temperature. The day temperatures may reach such figures as 115° Fahr. in the shade. On the other hand, the night temperature, as so often occurs in desert countries, sinks rapidly to such figures as 50° in the winter season. The average temperature during the hot or summer half of the year is probably 83° Fahr. During the winter season a cold, dry wind often blows furiously from the north-east. The wind from this quarter is always strong, cold, and dry throughout the eastern parts of the Protectorate, and is much disliked by Europeans. The rainfall in the Rudolf region is variable. Some districts or patches of country may go for two or three years without a drop of rain; others may have a very heavy fall, which, though raising the yearly average to a considerable figure, is wasted by its violent descent during a short space of time. To the north-west and west of the lake, where the ground rises to a higher altitude, the climate is altogether superior, the rain is a little more regular in its descent, and the temperatures are not so high.

(2) *The Plateau Region.*—This is practically confined to the portion of the Rift Valley about Lake Naivasha and to the great Nandi Plateau, though there are repetitions of this climate on the upper parts of Mount Elgon and in small portions of Ankole; perhaps also on one or two of the higher mountains in the eastern part of the Nile Province. In this plateau region the climate is well-nigh perfect. There is an abundant rainfall (except, perhaps, near Lake Naivasha) of about 50 inches per annum, distributed more generally throughout the year than is usually the case in the tropics. The rainy months cannot be predicted with absolute certainty, as the climate is somewhat fickle. Ordinarily, however, there

are heavy rains in January, February, and March; slight rains in April; heavy rains in July and August; and light rains again in October and November. The average yearly temperature is probably 60°, the thermometer seldom going above 80° or below 40°. There is not a great range of temperature between the seasons; indeed, in this equatorial region the seasons are very variable, and are chiefly the distinction between a month that is very wet and a month that is rather dry. The climate may be said in general to be a perpetual summer of a mild European type.

(3) *The Forest Region.*—This division of general tropical luxuriance includes all the countries bordering on Lake Victoria Nyanza, Lake Albert, Lake Kioga, and Lake Albert Edward, the valley of the Semliki and of the Victoria Nile between Kioga and the Ripon Falls, the forested slopes of Mount Elgon and the Nandi Escarpment, and all the Kavirondo country. This region is emphatically a country of thunderstorms, which occur here with the frequency and violence to which I have made allusion in Chapter III. These thunderstorms, in fact, are almost the only climatic drawback; for although the generality of this land does not lie much above 4,000 feet in altitude, the sun rarely causes extreme discomfort by his heat. Sometimes the thermometer may touch 100°, but this is infrequent. More often the high temperatures are 92° or 93°; while the average day temperature is not more than 85°. The nights are nearly always cool, the thermometer falling at least as low as 70°. It has been calculated by members of the Church Missionary Society that the average minimum temperature in Uganda is 52·1° and the maximum 81·8°. Rain is abundant, and although it is heavier in some months than in others, there is scarcely a month of the year which is without rain. The heaviest rains generally occur in January, February, March, and April, October and November. I should say that the average rainfall in this Forest Region was 60 inches. It is subject, however, to variability. In 1899 the rainfall recorded at two stations in Uganda only averaged 34 inches, which fell on 61 days. In 1900 the average rainfall at the same stations in Uganda proper was 60 inches. In 1896, 51·6 inches were registered in Uganda, falling on 136 days. The rainfall in the same district in 1897 was 67 inches, and the number of rainy days was 164. In 1898 the total rainfall at the same stations in Uganda was 50 inches, falling in 131 days. In 1899 the rain only fell on 61 days during the year in Uganda, and elsewhere to the east of Uganda a severe drought visited the Protectorate.* The rainfall in Toro is probably 80 inches per annum (I am not speaking of the slopes of Ruwenzori, which will be treated of separately). In Buddu,

* It would seem as though during the seven years from 1879 to 1885 inclusive the rainfall in the central part of Uganda was slightly below the average here given, and, in fact, only averaged about 48 inches.

which is the south-western prolongation of Uganda proper, the rainfall may be quite an average 70 inches. Winds in these forest regions are light and variable generally, though heavy squalls break on the Victoria Nyanza, and the south wind on Lake Albert Nyanza is of great force and raises terrific seas. On land, however, the only wind which is objected to is the west wind, which is cold and clammy, and generally associated with malarial fever. Lake Victoria and most of the other lakes in the Protectorate are usually at their lowest in the month of November.

It is thought by Mr. E. G. Ravenstein that the extreme range in the level of the Victoria Nyanza between the lowest and the highest known conditions of the lake is as much as ten feet; but this calculation is based on the supposition that the French missionaries in Uganda are correct in stating that the level of the lake in 1881 stood eight feet above the level of 1898. But ever since regular observations have been taken by Government officials on the lake shores, the extreme range in the level between the highest and lowest recorded is 43·5 inches. On June 1st, 1901, the level of the Victoria Nyanza was two feet above the mean level of 1896. As already stated, the lowest level of this and other lakes probably occurs in the month of November, and the highest level on all these waters is attained in July, a condition which corresponds to some extent with the flooding of the Nile in Egypt. The rise of these lakes and the consequent rise of the Nile begins in January, becomes marked in June, and reaches its height in July, thence dropping rapidly to the end of November.

(4) *The Nile Region.*—This includes all the countries west of the Rudolf watershed, nearly all the Asua River, and the lands to the north of the Victoria Nile, east of the main Nile and south of the fifth degree of north latitude. In this region the temperatures reached are nearly as high as on the shores of Lake Rudolf. The rainfall is very variable in the Nile Province. Portions of the eastern part of these countries have an uncertain rainfall that from year to year may not give an average of more than 20 inches, perhaps not even that. Near the banks of the Nile, in the Nile Valley, the rainfall is heavy, though it is badly distributed, giving perhaps an annual average of 40 inches. The average temperature for the year is about 85°. The recorded maximum is 112° and the minimum 70°. The country along the banks of the Nile is extremely hot, and has a higher average temperature, no doubt, than the more hilly countries to the east. In the Latuka country there are many agreeable sites possessing a climate which might be referred to the Plateau Region (No. 2), where here and there a point can be attained where the climate and temperature belong to the fifth, or Alpine Region. The hottest months of the year are from April

to November. The heaviest rains probably fall at this time. In dry seasons severe droughts may occur. It is usually a country of strong winds, the winds blowing down the valley of the Nile from the south during the summer months and from the north during the winter.

(5) *The Alpine Region.*—This of course is very small in area, and includes the Ruwenzori range above 8,000 feet in altitude, two or three points in Ankole of 8,000 feet or over, the tops of some of the high mountains in the Nile and Central Provinces, the upper regions of Mount Elgon, and the mountain ridges on the Nandi Plateau of Chibcharañán, Elgeyo, Londiani, and the high mountains immediately to the west of Lake Naivasha. The average temperature in these regions may be placed hypothetically at 45°. The temperatures on the snow and ice may descend to perhaps 25°.

The degree of navigability of lakes and rivers is indicated with approximate correctness on the accompanying map.

The climate in tropical Africa does not always bear a direct ratio to health. Questions of salubrity and insalubrity depend on many other local conditions than the degree of heat or cold, or the variation between extremes of temperature. It may be said without exaggeration that between the Zambezi on the south and the Albert Nyanza on the north, between Kilimanjaro on the east and the Cameroons and Senegal on the west, the climate of Central Africa is generally agreeable, and much more equable than in tropical Asia. The whole of Uganda, except parts of the Rudolf and Nile Provinces, has an agreeable climate, yet all parts of the Protectorate below 4,500 feet in altitude tend to be unhealthy. This would seem to be due, in the first place, to the germs of diseases which are generated in marshy districts; and, secondly, to the mosquitoes and other agents for the introduction of those germs into the human frame. If, therefore, some means could be found of abolishing the conditions which produce those germs, or destroying the agents by which they reach the human blood or digestive organs, the greater part of tropical Africa which is not subjected to the exceptional heat and moisture of the west coast, of Zanzibar, and of the Upper Nile Valley, would be fairly healthy for European occupation. Nevertheless, I doubt whether in any districts which are below 5,500 feet in altitude within the tropics the European race could perpetuate itself from generation to generation without deteriorating. Fortunately there are considerable areas within the East African Protectorates above this height, and, if intervening districts could be robbed of their danger by the extinction of malaria and dysentery, or the means by which we become infected with malaria or dysentery, tropical Africa would lose its terrors, and produce and maintain several white nations.

NOTES ON THE COLLECTIONS OF

ROCKS AND MINERAL SPECIMENS FROM THE UGANDA PROTECTORATE

MADE BY SIR HARRY JOHNSTON, MESSRS. GEORGE WILSON, RACEY, WM. GRANT, C. W. HOBLEY, F. W ISAAC, AND OTHERS.

BY MESSRS. L. FLETCHER AND G. T. PRIOR, OF THE MINERALOGICAL DEPARTMENT, BRITISH NATURAL HISTORY MUSEUM.

THE rock specimens include examples of the Archæan gneisses, schists, and granites, which constitute the main mass of the Uganda plateau: specimens of these rocks come from the Busoga, Bukedi, Elgon, and Unyoro Districts, from Ruwenzori and the Nile Province. Besides these basement rocks, there are specimens of ferruginous, schistose, and slaty rocks from Unyoro, possibly belonging to the Palæozoic Karagwe series; coarse ferruginous sandstones and quartzites from the shores of Lake Victoria Nyanza and Lake Naivasha, and from Ankole; and volcanic rocks (chiefly phonolites) from the Elgon and Baringo Districts, the Kamásia hills, Lake Nakuro, and the Nandi District.

Of minerals of economic value, the collection contains specimens of iron ore, graphite, and diatomaceous earth. The iron ore includes specimens of magnetite from Budolo hill, Masaba (Elgon); Nagarive hill, Bukedi; and Jinja, Busoga; and of ironstone (limonite chiefly), from Bukonge and Jinja in Busoga, from the Bugaya islands, Buvuma, Kavirondo Bay, Ankole, and Unyoro. Graphite is present in small amount on specimens from Unyoro (Chief Byabaswezi), and the diatomaceous earth occurs 8 miles west of the Katonga River, and also on the shore of Lake Nakuro. As to the occurrence of gold, all that can be said is that no visible gold could be found upon any of the numerous specimens of quartz in the collection.

The Catalogue of Specimens proceeds in geographical order from East to West.

MAU, NANDI, AND BARINGO DISTRICTS.

Locality.	Name.
Cliffs on north-west coast of Lake Nakuro	Kenyte.
Hill facing Lake Nakuro, south of railway station	Tuff.
Hill north of railway station, Lake Nakuro	Glassy lava (Kenyte).
Hill north-east and 5 miles from Lake Nakuro	Scoria.
Shore of Lake Nakuro	Diatomaceous earth.
Seget Valley, Nandi District	Phonolite.
Sigowet hills, "	"
" "	"
Bed of Seget River, Nandi District	"
Kamásia hills, below ravine	Red jasper, quartz, chalcedon, calcite, and phonolite.
Baringo District, Eldama Ravine	Basalt, scoria, and phonolite.
Lake Naivasha	Obsidian tuff, sandstone.
Bed of Nyando River, Nandi District	Nephelinite.
Bed of Lower Kedowa River	"
Upper waters of "	"
Nyando Valley, 10 miles west of Fort Ternan	Limestone from concretionary blocks in alluvial deposits overlying granite and gneiss.

MAU, NANDI, AND BARINGO DISTRICTS—*(continued)*.

Locality.	Name.
Nyando Valley, 3 miles south of Kitoto	Limestone.
Mkindu River, Nyando Valley, near cart road from Kisumu to Fort Ternan	Gneiss.
Kiblules or Stormy River, 10 miles west of Fort Ternan	"
Upper Nyando Valley, 1½ miles north of Mount Blackett	Tuff.
Langoro camp, 3 miles west of Mau summit	Phonolitic trachyte.
Southern slopes of Tindaret, Mount Kamililo country	Phonolite.
Mount Manava, 12 miles west of Fort Ternan	"
Awichina, 8 miles north of Kisumu	Granite.
" " " "	"
Korando hills, 4½ miles north of Kisumu	Phonolite.
" 2 " "	"
Kisumu, raised beach 1 mile from shore of Lake Victoria Nyanza	Pisolitic ironstone.
Lake-shore, south of Port Victoria	Decomposed schist.
Kisumu, ¾ mile from lake	Phonolite.

CENTRAL PROVINCE.

ELGON DISTRICT.

Mumia's	sub-district	Basalt.
Nyifwa	"	Quartz.
"	"	"
Tindi	"	Gneiss.
"	"	"
Kabarasi	"	"
"	"	Quartz.
"	"	Diabase.
Marama	"	Gneiss.
"	"	Quartz.
Nzoia River	"	"
"	"	"
"	"	Gneiss.
Lusimo River	"	Decomposed granite rock.
Ketosh (Upper Nzoia River)	sub-district	Quartz.
"	sub-district	Gneiss.
"	"	Basalt? weathered.
Kakumega	"	Gneiss.
Kikelelwa	"	Quartz.
"	"	"
Mumia's	"	"
Nyala	"	Gneiss.
Sio River	"	Gneiss?
"	"	Quartz.
"	"	Gneiss.

CENTRAL PROVINCE—ELGON DISTRICT—*(continued).*

Locality.	Name.
Lego sub-district	Gneiss.
" "	Quartz.
Samia hills	Gneiss.
"	Granite.
"	Quartz.
"	"

Mount Elgon, Southern Flanks.

7,000 feet	Augite crystals.
"	Nephelinite ?
"	Decomposed rock.
6,000 feet	Fossil wood.
8,000 feet	Augite in volcanic bomb ?
"	Basalt ?

BUSOGA AND BUKEDI.

Budolo hill, South-West Elgon	Magnetite.
Bukedi country, near Elgon	Decomposed mica schist.
Namujumba's, shore of Victoria Nyanza, Busoga	Grit.
Jinja, Busoga	Hornblende-schist.
" "	Mica-schist.
Nampirika, Busoga	Hornblende-schist.
Jinja, Busoga	Quartz.
Bukonge, Lake Victoria Nyanza, Busoga	Ironstone.
" " " "	Quartzite.
" " " "	Ferruginous sandstone.
" " " "	Quartz.
Iganga, Busoga	"
" "	Pegmatite.
" "	Epidosite.
Bugwen "	Quartzite.
Kibui, Busoga, shore of Lake Victoria Nyanza	Diabase.
Iganga, Busoga	Gneiss.
Bukonge "	Ironstone.
Jinja, Busoga	Laterite ?
" "	"
" "	Slate.
" "	Hornblende-schist (decomposed).
" "	Ironstone.
" "	Epidiorite.
" "	Decomposed hornblende-schist.
" "	" " "
" "	Ironstone.
" "	"
Nakalanga	Quartz.
"	"
"	Sandstone.

CENTRAL PROVINCE—BUSOGA AND BUKEDI—*(continued)*.

Locality.	Name.
Jinja, Busoga	Magnetite.
Luba's „	Quartz with mica.
Bukonge, near Luba's, Busoga	Ferruginous schist.
Kalanga, Busoga	„ „
Budolo hill, Bukedi	Magnetite.
Lubusa hill „	„
Amaganda hill „	Quartz.
Nabutitisi hill „	Mica schist.
„ „	Gneiss.
Mamjefe hill „	Decomposed rock.
Namanswa hill „	„ „
Asitosiro hill „	Granite.
Madegi hill „	Decomposed rock.
Sunurwa hill „	„ „
Natere hill „	„ „
Makakala hill „	Quartz.
Wadubi „	Decomposed rock.
Bugagi hill „	Large felspar crystal.
Nagabu hill „	Decomposed rock.
Kumaga hill „	„ „
Bukyan „	„ „
Nagarive hill „	Magnetite.
Magamiti hill „	Decomposed rock.
Nelubi hill „	„ „
Kumaga, Nasika „	Pegmatite.
Masige hill „	Decomposed rock.
Musara hill „	„ „
Kyabala „	Pegmatite.
„ „	Granite.
River Ntowolo „	„
Kuzaki hill „	„
Mulawa hill „	Quartzite.
„ „	Pegmatite.
„ „	Gneiss.
Kadudamu hill „	„
„ „	Schist.
Kamurujo hill „	Gneiss.
Nabare hill „	„
Kakani hill „	Granite.
„	Tuff.

ISLANDS ALONG NORTH SHORE OF LAKE VICTORIA NYANZA.

Bugaya islands	Quartz, ironstone, ferruginous sandstone, quartzite, claystone.
Small island near Bagi, Buvuma	Phyllite.
Main island, Buvuma	Quartz with mica.
„ „	Red ferruginous schist.
Buvuma, Marabio island	Ferruginous schist.

CENTRAL PROVINCE—*(continued).*

UGANDA (KINGDOM OF).

Locality.	Name.
Near Kisubi	Ferruginous sandstone.
Entebbe	Quartz.
Kampala	"
Entebbe	Clay.
"	" with muscovite.
Near Kisubi	Ferruginous sandstone and quartzite.
Bay between Sango and Kisubi	Ferruginous schist.
Between Kisubi and Kampala	Sandstone.
Sango	"
Tagana	Quartzite.
Eight miles west of Katonga River mouth	Diatomaceous earth.

WESTERN PROVINCE.

UNYORO.

Territory of Chief Tibansamba	Ferruginous schist or phyllite
" " "	Limonite.
" " "	Ferruginous schist.
" " "	Decomposed rock.
" " "	" gneiss.
Territory of Chief Mutwa	Gneiss?
" " "	Felsite?
" " "	Mica-schist.
" " "	Gneiss?
" " "	Dolerite?
" " "	Gneiss.
" " "	Pyroxene-grenulite.
" " "	Quartz.
Territory of Chief Byabaswezi	Junction of decomposed basalt? with schist.
" " "	Quartzite.
" " "	Quartz.
" " "	" with graphite.
" " "	Graphite in decomposed gneiss.
" " "	Schist.
" " "	Decomposed rock.
" " "	Arkose?
" " "	Ferruginous schist.
" " "	Lyddite.
" " "	Claystone.
" " "	Quartzite.
" " "	Ferruginous breccia.
" " "	" quartz-schist.
Territory of Chief Kiza	Schist.
" " "	Arkose.
" " "	Ferruginous schist.
Territory of Chief Basigala	Limonite.
" " "	Ferruginous schist.
Territory of Chief Katalikao	Limonite.

Notes on Rock Specimens from Unyoro.

By Mr. G. T. Prior, Natural History Museum.

The specimens from Unyoro in Sir Harry Johnston's collection of rocks from the Uganda Protectorate consist mainly of a series of ferruginous shales, varying in colour from pale brown and purple to deep brick-red, and sometimes banded with black lyddites and a few softer and more schistose phyllites.

These rocks present striking similarities with Hatch's "Hospital Hill" series of the Southern Transvaal, and also with rocks from the Ingwenya Berg, Swaziland. The "Hospital Hill" series of ferruginous shales occurs in the neighbourhood of Johannesburg as part of Hatch's Cape system with the Witwatersrand auriferous quartz-conglomerates immediately above it. [*Quarterly Journal Geological Society*, iv. 1898, ff. 73, 99.]

The Swaziland ferruginous shales, or "argillites," which probably belong to the same series, occur in association with gold-bearing serpentine and talcose schists. [*Geological Magazine*, vi. 1899, pp. 105–111; the rocks marked T. B. in Professor Rupert Jones's list.]

Amongst the rocks from Unyoro is a specimen of quartz which certainly presents some points of resemblance with that of the auriferous Banket formation of the Transvaal. Although, in the absence of their field-relations, it is not advisable to lay too much stress upon the resemblance of these rocks from Unyoro with the "Hospital Hill" series of the Transvaal, yet the similarity of the rocks is sufficiently striking to suggest the idea that *if gold is to be found in the Uganda Protectorate, Unyoro is the most likely district in which to look for it.*

Bari District, Nile Province.

Locality.	Name.
Mount Belinian	Gneiss.
Jibalokaju, north-west of Rajaf, left bank of Nile	"
Mount Lado, left bank of Nile	"
Twelve miles north of Bedden, right bank of Nile	"
Near Bedden	" and basalt.

Toro.

Near north-east slopes of Ruwenzori	Mica-schist, hornblende-schist, and diorite ?
Ruwenzori, south-east flanks, 4,500 feet to 13,000 feet	Fibrolite.
" " "	Gneiss with chlorite.
" " "	" " pegmatite.
" " "	Gneiss
" " "	Granite.
" " "	Tuff.
" " "	"
" " "	Gneiss with chlorite.
" " "	" "
" " "	Gneiss.
" " "	Epidiorite.
" " "	"
" " "	Mica schist.
" " "	"
" " "	"
" " "	"
" " "	Quartz.
" " "	Epidiorite.

PROVINCE.

ANKOLE.

Locality.	Name.
North-West Ankole	Quartz with mica, quartz with oxide of iron, quartz grit with mica from 1° S., 29° 51′ E.
" "	Tuff ? from Kichwamba, Bunyaraguru.
" "	Quartz with oxide of iron, decomposed mica-schist ? from north of Kisara, in Bunyaraguru Forest.
" "	Quartz, quartzite, mica schist from Egara hills.
" "	Hæmatite-schist, oxide of iron from Ebari.
" "	Quartzite, ferruginous sandstone with mica from Nyakabingo, Bukanga.
" "	Quartz, ironstone.
" "	Quartz.
"	Granite.
" "	Quartz with tourmaline.
" "	Coarse sandstone.
" "	Oolitic ironstone.
" "	Quartz.
One mile south-west of Kisasa gap	Ferruginous shale.
" " "	Tourmaline and quartz from Charienzi.
" " "	Iron wire made from ore found at Kahiro.
Southern Ankole	Impure kaolin (mainly quartz) from Mbarara.
" "	Quartz from Ruhihi Sema.
" "	" " Mbiumbi, Egara.
" "	" with mica from Kisenyi, Egara.
Western and South-Western Ankole	Quartz from Chamianga, Ruzumburu.
" " "	Quartz from Niamizi, Ruzumburu.
" " "	" with oxide of iron from Ngoma, Luchika.
" " "	Clay (decomposed schist) from 15 miles north-east of Mount Mfumbiro, Luchika.
" " "	Basalt, scoria, clay, quartz and ferruginous sandstone from mountain between Lake Chagasa and Mount Mfumbiro.
" " "	Quartz with mica from north end of Lake Kikombe.

Mr. G. T. Prior contributed to the Mineralogical Society on March 25th, 1902, a paper on the petrology of British East Africa, the result of examinations of the collection of rock specimens made by Professor J. W. Gregory during his expedition to Mount Kenya and Lake Baringo in 1892-3, and of collections from the Uganda Protectorate made recently by Sir Harry Johnston. Descriptions were given of the three main groups of rocks—viz., the basement Archæan gneisses and schists, the Palæozoic shales and sandstones, and the Tertiary volcanic rocks. The gneisses and schists are associated with dykes both of acid pegmatites and of basic diabasis and epidiorites, and also with granulitic rocks analogous to the Charnockite series of India and Ceylon. Of the Palæozoic Karagwe series a collection of ferruginous shales and siliceous schists from Unyoro was described. These rocks present striking similarities with those of Hatch's Hospital Hill series of the Transvaal and with rocks from the Ingwenya Berg, Swaziland, and a correlation between the Karagwe series and the Cape system of the Transvaal was suggested. The volcanic rocks consist mainly of soda-rich phonolitic rocks which have resulted doubtless from a nepheline-syenite magma. The lavas from the volcanoes of the Great Rift Valley and of Mount Kenya and the region between are characterised, like those of the Canary Islands and the Azores, by the prevalence of anorthoclase, by the large amount of soda-amphiboles (cossyrite, catophorite, arfvedsonite), as well as of soda-pyroxenes and by the absence of sphene and noseau. They form a remarkable example of a rock series showing a gradation in composition from basic phonolites, containing nepheline both in large phenocrysts and in the ground-mass, through phonolitic trachytes containing no recognisable nepheline, to phonolitic quartz-trachytes, and finally to acid riebeckite-rhyolites containing much quartz. The later eruptive rocks from Mount Elgon and the western side of the Great Rift Valley present some points of distinction with the earlier erupted rocks. They are generally of a more basic character like those of Kilimanjaro as compared with those of Mount Kenya. Another point of distinction is the presence in them of titanic acid in large amount, in the form of perofskite in the more basic nephelinites, and as sphene in the phonolites, which are of the more ordinary type without soda-amphiboles. Most of the specimens from Mount Elgon and the neighbourhood consist of nephelinites, but in some of them the nepheline, both as phenocrysts and in the ground-mass, is partially or wholly replaced by melilite. Examples of melanite-nepheline rocks allied to borolanite, and of monchiquite dyke-rocks from Mount Elgon, were also described. A specimen of nephelinite from the neighbourhood of Ruwenzori containing much perofskite suggested the contemporaneity of the eruptive rocks of Mount Elgon and of the volcanic region at the foot of Mount Ruwenzori.

SALT SPRINGS NEAR EAST SHORE OF LAKE ALBERT NYANZA

Analyses of Samples of Water and Salt from Kibero Springs, Unyoro.

The following report was obtained by the Crown Agents for the Colonies from Messrs. Stanger & Blount, Chemical Laboratory, 2, Broadway, Westminster.

The waters were slightly yellowish in colour, and contained a small amount of black sediment.

Mineral Spring No. 1.

	Grains per gallon.
Silica (SiO_2)	3·64
Ferric oxide + alumina ($Fe_2O_3Al_2 + O_3$)	0·70
Lime (CaO)	6·44
Magnesia (MgO)	2·66
Soda (Na_2O)	155·82
Potash (K_2O)	20·23
Carbonic anhydride (CO_2)	0·42
Sulphuric anhydride (SO_3)	10·13
Chlorine	194·46
	394·50
Deduct oxygen equivalent to chlorine	43·82
	350·68
Combined water, organic matter, and loss	20·74
Total solids	371·42

The chief salts probably present are therefore—

	Grains per gallon.		Grains per gallon.
Sodium chloride (NaCl)	294·05	Magnesium sulphate ($MgSO_4$)	2·79
Potassium chloride (KCl)	32·07	Magnesium chloride ($MgCl_2$)	0·99
Calcium sulphate ($CaSO_4$)	15·64	Magnesium carbonate ($MgCO_3$)	0·80

The sample is a highly saline water, from which common salt could be easily prepared by evaporation. It also contains a noteworthy quantity of potassium salts, the recovery of which from the molten liquor might yield a valuable artificial manure.

Mineral Spring No. 2.

	Grains per gallon.
Silica (SiO_2)	1·96
Ferric oxide + alumina ($Fe_2O_3 + Al_2O_3$)	0·56
Lime (CaO)	3·50
Magnesia (MgO)	1·26
Soda (Na_2O)	124·28
Potash (K_2O)	12·46
Carbonic anhydride (CO_2)	7.29
Sulphuric anhydride (SO_3)	7·00
Chlorine	140·42
	298·73
Deduct oxygen equivalent to chlorine	31·64
Total solids	267·09

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CHAPTER XI

BOTANY

THE aspect of the flora of the Uganda Protectorate, as it would strike the unscientific traveller passing hurriedly through the country, has been dealt with in the earlier chapters of this book, which attempted to give an approximate idea of the general aspect of the landscapes.

From a botanical point of view the Protectorate may be divided perhaps into five regions :—

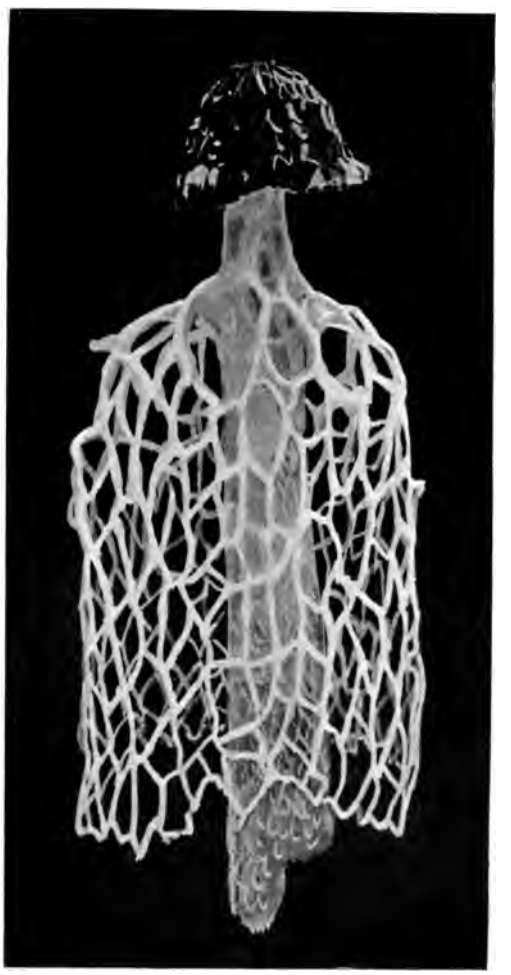
(1) The first I would characterise as the *Somali Region*, which would include the arid country in the basin of Lake Rudolf, and up the Rift Valley as far as the north end of Lake Baringo. Some aspects of this

208. FLAT-TOPPED ACACIA (GROWING AT ABOUT 6,000 FEET UNDER THE EQUATOR), VERY CHARACTERISTIC OF THE HILLY CENTRAL AFRICAN REGIONS

Somali steppe region reappear again in the Rift Valley to the south of Lake Naivasha. This region would be characterised by a sparse vegetation almost identical with that found in Somaliland, with a few types

perhaps characteristic of the Sahara Desert or of the southern slopes of the Abyssinian mountains.

(2) The *East African Region*, a land of grass, *Borassus*, *Hyphœne*, and wild date palms,* euphorbias, acacias, thorn-bushes, *Sanseviera*, and



209. CURIOUS FUNGUS COMMON IN FOREST REGIONS

perhaps baobabs,† which is particularly characteristic of the low-lying parts of German, Portuguese, and British East Africa, and of some parts

* Possibly *Phœnix spinosa*.

† Though none have yet been reported from within the limits of the Uganda Protectorate.

210. A *PODOCARPUS* (YEW) TREE ON NANDI PLATEAU

211. JUNIPERS ON MOUNT ELGON

of Africa to the south of the Zambezi. This typical East African flora appears in the Nile Province below an altitude of 3,000 feet, in the northern parts of the Central Province, in the proximity of Lake Baringo, and perhaps in the upper part of the Semliki Valley and the northern shores of Lake Albert Edward.

(3) The third region would be that which I should style the *Central African*. The flora here is well represented by that of British Central Africa, a list of the principal forms of which appears in my book dealing with

212. LOBELIAS (*L. STUHLMANNI?*) AND KNIPHOFIAS GROWING AT 10,000 FEET ON NANDI PLATEAU

that country. This Central African region presupposes an average altitude of 3,500 feet in the equatorial regions of Uganda. It is characterised by abundant vegetation, a great deal of grass, many species of herbaceous plants, rich forest in river valleys: in general, a transition between the poorer East African flora and the forest region of West Africa. This well-vegetated region is remarkable for its brilliantly coloured flowers, especially in the interior parts of Kavirondo, Busoga, Uganda, Unyoro, Toro, and Ankole, between 4,000 and 6,000 feet in altitude.

(4) *The West African Forest Region.*—This is particularly characteristic of the countries near the shore of the Victoria Nyanza, in Busoga, Uganda

(especially Buddu), and of the Sese Islands. Forest of West African affinities is also present in Western Unyoro and Toro, on the west slopes of Mount Elgon and the Nandi Escarpment, and in the Lower Semliki Valley and Western Ankole. Many of the trees in these forests are also present in the Congo basin and the Gaboon and Cameroons; but some, though very nearly allied to West African forms, are in actual affinity with forest trees of the western Nile basin. Palms of the genera *Elæis* and *Calamus* so charac-

213. *ERYTHRINA TOMENTOSA* (AKIN TO THE "KAFFIR BOOM" OF SOUTH AFRICA)

teristic of West Africa appear to be totally absent from the Uganda forests.*

(5) *The Plateau or Alpine Region.*—Everywhere between 6,500 and 10,000 feet there is a flora which recalls alternately the trees and plants of temperate South Africa and temperate Abyssinia. It is characterised by the shorter grass, the presence of conifers (yew and juniper), witch-hazels (*Trichocladus*), of *Habenaria* orchids, bamboos, giant lobelias, giant groundsels, brambles, tree-heaths, tree-ferns, dracænas (these also grow down to 4,000

* Sir Henry Stanley, however, asserts that he saw the *Elæis* or Oil palm growing in the Semliki Forest (Buamba) on the verge of the Congo Free State.

SUNFLOWERS IN UGANDA.

feet), kniphofias ("red-hot pokers"), violets, buttercups, clover, forget-me-nots, hypericums, geraniums.

A great many of the trees and plants of the Uganda Protectorate would be ornamental additions to our gardens and conservatories. As many of the plants come from lofty regions subject to occasional low temperatures, not a few of them would apparently stand cultivation in England in the open air. I certainly hope that the magnificent *Erythrina* (of which I have sent a number of seeds to Kew) may be introduced into cultivation, if it be not

214. *CRINUM* LILY

already known. It is sufficiently illustrated in this book not to need any further description. There is also the handsome *Acanthus arboreus*, illustrated in this book. The commonest species of this fine shrub has blossoms of a beautiful mauve pink, but there is another species (*A. eminens*) that is never found below 8,000 feet, and seems to be confined in its range to the Nandi Plateau, the flowers of which are equally large and of a vivid ultramarine blue. The extraordinary lobelias of the Alpine regions would make handsome additions to our ornamental plants, and they should thrive well in a cold, moist climate. Some of the ipomœas (convolvuluses) and solanums of high mountains which grow as creepers with large flower-

clusters, several species among the innumerable bean- and pea-flowers, the mussændas (bushes with gorgeously coloured bracts of flowers of scarlet-

215. RAPHIA PALM OF UGANDA, FRUITING

scrimson allied to the gardenia), and two or three kinds of clematis would be handsome and interesting additions to the ever-extending list of our cultivated trees and plants. The white and pink-veined *Crinum*

216. CYCADS' MODE OF GROWTH IN TOKO

lilies should not be overlooked. Amongst palms the Uganda Protectorate produces a raphia, the *Borassus flabellifer*, possibly *Hyphœne thebaica* (which is said to occur near the Nile, on the frontier of the Egyptian Sudan, and also in part of the Rudolf region), and the *Phœnix spinosa* (?). or wild date. Although Uganda contains so much forest of

217. THE CONE OF A CYCAD

West African appearance, I have not yet encountered the Oil palm (within the limits of Uganda), though I recognised it at once in the Semliki Forest within Congo Free State territory. Cycads (*Encephalartos*) are found in the river valleys of the District of Toro. In the same district the *Pandanus*, or screw pine, appears, growing in rivers that run through dense forests.

218. *PANDANUS*, OR SCREW PINE

The following is a list of the plants collected by me on the Ruwenzori range between its base at 4,500 feet and snow level (13,000 feet):—

Ranunculus pubescens, Thunb.
Nymphæa stellata, Willd.
Cardamine pratensis, L.
Arabis alpina, L.
Polygala, near *Fischeri*, Gürke.
Hypericum lanceolatum, Lam.
Symphonia sp.
Hibiscus Grantii, Mast.
Hibiscus ?
Grewia mollis, Juss.
G. populifolia, Vahl, forma (*G. membranacea*, A. Rich.).
Geranium aculeolatum, Camb.

Impatiens Ehlersii, Schweinf.
Cardiospermum microcarpum, H.B. & K.
Bersama, cf. *abyssinica*, Fres. Flowers only.
Dolichos shuterioides, Baker.
Milletia sp.
Æschynomene sp.
Tephrosia dichroocarpa, Stend.
Parochetus communis, Ham.
Cynometra Alexandri, C. H. Wright, sp. nov.
Alchemilla, near *A. argyrophylla*, Oliv.
Rubus Doggettii, C. H. Wright, sp. nov.
Kalanchoe, cf. *glaucescens*, Britten.
Combretum racemosum, P. Beauv. (4,000 feet).
Begonia sp.
Anthriscus dissectus, C. H. Wright, sp. nov.
Oldenlandia abyssinica, Hiern.
Pentas Ainsworthii, Scott-Elliot.
P. occidentalis, Benth. & Hook. f.
Pentas, near *verticillata*, K. Schum.
Visecta, cf. *multiflora*, Sm.
Mussænda erythrophylla, Schum. & Thonn.
Vernonia hymenolepsis, A. Rich.
Vernonia, cf. *Melleri*, Oliv. & Hiern.
Gerbera Lasiopus, Baker.
Coreopsis Steppia, Steetz.
Helichrysum elegantissimum, Dl.
Helichrysum sp. Flowers only.
Senecio sp., near *S. Johnstoni*, Oliv.
Senecio sp.
Echinops, cf. *giganteus*, A. Rich.
Lobelia Giberroa, Hemsl.
L. Deckenii, Hemsl.
L. Stuhlmanni, Schweinf.
Erica arborea, L.?
Philippia sp.
Asclepias macrantha, Hochst.
Belmontia grandis, E. Meyer.
Cynoglossum cœruleum, Hochst.
Solanum runsoriense, C. H. Wright, sp. nov.
Hypoestes triflora, Roem. & Schultes.
Justicia pinguior, C. B. Clarke.
Streptocarpus caulescens, Vatke.
Lantana salviifolia, Jacq., var. *ternifolia*, Baker.
Premna sp.
Clerodendron myricoides, R. Br.
Celosia sp.
Fleurya æstuans, Gaud.
Synadenium sp.
Arthrosolen latifolius, Oliv.
Podocarpus sp.
Encephalartos sp. Leaflets only (4,000 feet).

Eulophia milanjiana, Rendle.
Eulophia sp.
Polystachya sp.
Angræcum sp.
Disa Stairsii, Kränzl.
Gladiolus quartinianus, A. Rich.
Asparagus africanus, Lam.
Chlorophytum blepharophyllum, Schweinf.
Scilla, sp.
Gloriosa virescens, Lindl.
Bulbostylis trichobasis, var. *uniseriata*, C. B. Clarke.
Pycreus rehmannianus, C. B. Clarke ?
Carex runssorensis, K. Schum.
Poa sp.
Imperata arundinacea, Cyr.
Olyra latifolia, L.
Davallia elegans, Sw.
Cheilanthes farinosa, Kaulf.
Pteris flabellata, Thunb.
Asplenium furcatum, Lam.
A. amœnum, C. H. Wright, sp. nov.
A. rutæfolium, Mett.
Polypodium rigescens, Bory.
Lycopodium dacrydioides, Baker.
Breutelia Stuhlmannii, Broth.
Polytrichum sp. (barren).
Rhacocarpus Humboldtii (Spreng.).
Herberta juniperina, Spruce (*Sendtnera juniperina*, Nees).
Plagiochila sp. (barren).

The following is a description by Mr. Wright of the new plants from Ruwenzori :—

Cynometra Alexandri, C. H. Wright, a *C. Mannii*, Oliv., pedicellis non ferrugineo-tomentosis facile distinguiter.

Arbor 60 pedalis, ramis elongatis ex caule brevi ortis, ramulis virgatis leuticellis præditi. Folia bijuga, subsessilia ; foliola oblique lanceolata, acuminata, obtusa, glabra, inferiores 9 lin. longa, 4 lin. lata, superiores 1½ poll. longa, 6 lin. lata : stipulæ lanceolatæ, ad 3 lin. longæ. Racemi corymbosi, sessiles vel subsessiles ; rhachis minute pubescens ; pedicelli glabri, tenues, ad 6 lin. longi. Calycis tubus campanulatus, 1 lin. longus ; segmenta elliptica, obtusa, 2 lin. longa. Petala oblonga, obtusa, dilute roseo vel alba 3 lin. longa, 1 lin. lata. Stamina dilute roseo ; filamenta glabra, ad 4 lin. longa ; antheræ globosæ. Ovarium oblongum, breviter stipitatum ; stylus ovario æquilongus ; stigma truncatum.

Toro District : River Kirurume, ALEXANDER JOHNSTON.

Rubus Doggettii, C. H. Wright, a *R. apetalus*, Poir., differt foliis fere glabris et petalis quam sepala longioribus.

Folia pinnatim 5 foliolata ; foliola elliptica, basi rotundata, apice acuta, irregulariter crenato-serrata, glaberrima (nervis subtus pilosis exceptis), 2½ poll. longa, circa 1 poll. lata, breviter petiolulata, costa subtus spinis compressis recurvatis instructa ; rhachis

minute pubescens, spinis acutis compressis recurvatis 2 lin. longis instructa; stipulæ ovatæ, breviter acuminatæ, basi rotundatæ, pseudo petiolatæ, ciliatæ. Pedicelli appresse pubescenti, dense spinosi. Flores 1¾ poll. diam. Sepala lanceolata, acuminata, 8 lin. longa, 2 lin. lata, utrinque dense albido-tomentosa, ad costam parce spinosa. Petala suborbicularia, emarginata, breviter unguiculata, 9 lin. longa. Filamenta complanata, 2½ lin. longa; antheræ oblongo-lanceolatæ, 1 lin. longæ. Ovarium leviter falcatum, lateraliter compressum, dorso tomentosum; stylus 2 lin. longus; stigma punctiforme.

Ruwenzori, 8,500 to 12,000 feet, W. G. Doggett.

Anthriscus dissectus, C. H. Wright, a speciebus reliquis differt foliis magis divisis lobis ultimis angustis.

Herba robusta, fere undique hirsuta. Caulis 1 poll. diam., sulcatus. Folia quinquepinnatipartita, deltoidea, 1¼ ped. longa, 9 poll. lata, segmentis ultimis obliquis, 1 lin. longis, ⅙ lin. latis, valde acuminatis; vaginæ laxæ. Umbellæ paucifloræ; bracteolæ ellipticæ, mucronatæ, valde costatæ, ciliatæ, 1½-2 lin. longæ, 1 lin. latæ; pedicelli fructiferi 2 lin. longi. Petala viridi-flava; anterior obcordatum, 1 lin. longium, ¾ lin. latum; lateralia oblique obovata, ¾ lin. longa, ⅔ lin. lata; posteriora obovata, ½ lin. longa, ⅓ lin. lata. Filamenta subulata; antheræ subglobosse. Ovarium glabrum. Fructus 3 lin. longus, glaber.

Ruwenzori, 8,000 to 11,000 feet, W. G. Doggett; Kilimanjaro, 8,500 feet, Sir H. H. Johnston, G.C.M.G., K.C.B., No. 40.

First collected in young flower on Kilimanjaro, and afterwards in fruit on Ruwenzori.

Solanum runsoriense, C. H. Wright, ad *S. concinnum*, Schott, accedit, foliis supra subglabris floribusque majoribus differt.

Caulis scandens. Folia lanceolata, basi rotundata, supra pilis paucis simplicibus deciduis instructa, subtus pilis stellatis dense vestita, 3½ poll. longa, 1-1¼ poll. lata; petiolus 9 lin. longus. Inflorescentia terminalis, corymbosim paniculata, fere undique pilis stellatis stipitatis vestita; pedicelli 6 lin. longi. Calyx turbinatus; lobi oblongi, subacuti, ¼-2½ lin. longi, 1 lin. lati. Corolla cobaltina, paulo irregularis; tubus campanulatus, 3 lin. longus; lobi lanceolati vel ovati, acuminati, 5 lin. longi, 2-3 lin. lati. Stamina exserta; filamenta compressa, pubescentia, 1½ lin. longa; antheræ oblongæ, obtusæ, filamentis longiores. Ovarium globosum, ¾ lin., glabrum; stylus cylindricus, glaber, 2½ lin. longus.

Ruwenzori, 8,500 to 9,400 feet, W. G. Doggett.

Asplenium amœnum, C. H. Wright, ex affinitate *A. furcati*, Thunb., differt stipitibus glabris et frondibus anguste oblongis.

Stipites nigelli, supra canaliculata, subter concavi, glabri, 3 poll. longi, basi squamulis angustis brunneo-marginatis vestiti. Frondes 5½ poll. longæ, 1½ poll. latæ, flavo-virides; rhachides stipitibus similes; pinnæ lanceolati-deltoideæ, profunde incisæ, lobis obtusis, supra glabræ, subter squamulis minutis brunneis suffultæ; venæ furcatæ. Sori ad 4 lin. longi, flabellatim dispositi; sporæ læves, circa 40u longæ, 30u latæ.

East Toro: River Kirurume, alt. 5,000 feet, W. G. Doggett.

It may also be useful if I give a list of the plants collected on the slopes of Mount Elgon or on the adjoining Nandi Plateau:—

Farsetia stenoptera, Hochst.
Cleome diandra, Burch.
Capparis spinosa, L., forma.
Polygala persicariæfolia, DC.?

Viola abyssinica, Steud.
Talinum cuneifolium, Willd.
Hypericum lanceolatum, Lam.
Sida sp.
Abutilon sp.
Pavonia kilimandscharica, Gürke.
Tribulus terrestris. L.
Geranium simense, Hochst.
Vitis quadrangularis, Willd.
Rhus glaucescens, var. *schimperi*, Oliv.
Trifolium subrotundum, Steud.
T. africanum, Ser. ?
Sesbania pubescens, DC.
Crotalaria laburnifolia, L.
Grewia asiatica, L.
Bauhinia fassoglensis, Kotschy.
Rubus rigidus, Sm.
Alchemilla sp.
Kalanchoe sp.
Kalanchoe sp.
Trichocladus malosanus, Baker.
Cacoucia paniculata, Laws.
Combretum sp.
Terminalia sp.
Trachydium abyssinicum, Benth. & Hook. f.
Lythrum rotundifolium, Hochst.
Epilobium hirsutum, L.
Alepidea amatymbica, Eclil. & Zeyh.
Pentas thomsonii, Scott-Elliot.
Canthium sp.
Anthospermum sp.
Rubia cordifolia, L.
Scabiosa columbaria, L.
Felicia abyssinica, Sch. Bip.
Athrixia rosmarinifolia, Oliv. & Hiern.
Emilia integrifolia, Baker.
Gerbera lasiopus, Baker.
Notonia grantii, Oliv. & Hiern.
Senecio sarmentosa, O. Hoffm.
S. mannii, Hook. f., var.
Helichrysum declinatum, Less.
Helichrysum sp.
Sphæranthus cyathuloides, O. Hoffm.
Tarchonanthus camphoratus, L.
Conyza newii, Oliv. & Hiern.
Cereopsis sp.
Cephalostigma sp.
Lobelia sp.
L. deckenii, Hemsl.
Erica arborea, L.
Jasminum floribundum, R. Br.

Olea chrysophylla, Lam.
Asclepias glaberrima, Schltr.
Marsdenia spissa, S. Moore, var.
Calotropis procera, R. Br.
Brachystelma johnstoni, N. E. Br.
Heliotropium zeylanicum, Lam.
Cynoglossum cœruleum, Hochst.
Cuscuta obtusiflora, H. B. & K.
Cuscuta sp.
Solanum hastifolium, Hochst.
Rhamphicarpa heuglinii, Hochst.
Cycnium sp.
Veronica africana, Hook. f.
Thunbergia gibsoni, S. Moore.
Acanthus eminens, C. B. Cl.
Hypoestes verticillaris, R. Br.
H. triflora, Roem. & Sch.
Crossandra subacaulis, C. B. Cl.
Justicia anselliana, T. Anders.
Dyschoriste sp.
Hebenstreitia dentata, Linn.
Clerodendron myricoides, R. Br.
Micromeria sp.
Ocimum capitatum, Baker.
Plectranthus sp.
Leucas, near *thymoides*, Baker.
Boerhaavia diffusa, L.
Pollichia campestris, Sol.
Deeringia celosioides, R. Br.
Digera arvensis, Forsk.
Pupalia lappacea, Moq.
Cyathula sp.
Chenopodium sp.
Polygonum senegalense, Moq.
Loranthus fischeri, Engl.
Euphorbia sp.
Podocarpus falcatus, R. Br.
Eulophia sp.
Eulophia sp., rootstock yielding gum.
Pancratium trianthum, Herb.
Sansevieria guineensis, Willd.
S. sulcata, Boj.
Aloe sp.
Bulbine asphodelioides, Roem. & Sch.
Ornithogalum melleri, Baker.
Scilla indica, L.
S. maesta, Baker.
Aneilema æquinoctiale, Kunth.
Commelina sp.
Cyperus papyrus, L., var. *antiquorum*, C. B. Cl.
C. exaltatus, var. *dives*, Del.

Panicum (*Echinochloa*) sp.
Pennisetum sp.
Eragrostris sp.
Cheilanthes multifida, Sw.
Osmunda regalis, L.

This chapter may be concluded by a list drawn up for me by Mr. Wright, under the direction of Sir William Thiselton Dyer, K.C.M.G., at the Kew Herbarium, of all the plants known to occur within the Uganda Protectorate :—

LIST OF THE
PLANTS OCCURRING IN THE UGANDA PROTECTORATE,

COMPILED, BY PERMISSION OF THE DIRECTOR, FROM MATERIALS IN THE HERBARIUM OF THE ROYAL BOTANIC GARDENS, KEW,

BY C. H. WRIGHT, A.L.S.

In compiling this list (which must be regarded as provisional) the collection of Captains Speke and Grant has been taken as a basis, to which have been added the collections of more recent explorers. Speke and Grant entered the region now known as the Uganda Protectorate from the south about April, 1862, and, travelling round the north-western shore of Lake Victoria as far as Mutesa's, struck northwards and eventually quitted it in February, 1863, at Gondokoro on the Nile, 5° N. An enumeration of the plants collected during this expedition appeared as an appendix to Speke's "Nile Journal," but subsequently a more detailed account, by Professor D. Oliver, F.R.S., and others, was published in the twenty-ninth volume of "The Transactions of the Linnean Society." The figures accompanying this paper have been quoted in the following list (under the abbreviation T.L.S.), as well as the plant-names, when differing from those now accepted.

In 1880 a collection, chiefly from the Kingdom of Uganda, was received from the Rev. C. T. Wilson, M.A., a missionary and the first European resident in that country.

In the course of an expedition in 1890-1892, Dr. Stuhlmann collected to the north-west of Lake Victoria and on some of the islands in that region, subsequently journeying round the south and west of Lake Albert Edward, along the western side of Ruwenzori, and through the Semliki Valley to the south-west of Lake Albert.

A short time afterwards Mr. G. F. Scott-Elliot, M.A., B.Sc., entering the Protectorate at Mau, travelled westwards, and, having rounded the southern half of Ruwenzori, left the region and went southwards.

More recently Sir Harry Johnston, G.C.M.G., K.C.B., and his collectors have been busy, especially throughout the southern half of the Protectorate. The result of their labours has been incorporated in the following list as far as possible, but many of the plants collected by them have still to be determined, notably a large collection made by Mr. Alexander Whyte.

In the course of his expedition to Mount Kenya, Dr. J. W. Gregory collected a few plants in the Kamásia country.

The north-eastern part of the Protectorate remains to be explored botanically.

In this list "Uganda" refers in the restricted sense to the Kingdom or Province of Uganda.

PHANEROGAMS.

Ranunculaceæ.

Clematis Thunbergii, Steud. Madi, Speke & Grant; Ukidi, Speke & Grant.
C. grata, Wall. Uganda, Speke & Grant.
Ranunculus pubescens, Thunb. Ruwenzori, Doggett.

Anonaceæ.

Anona senegalensis, var. *latifolia*, Oliv. Unyoro and Madi, Speke & Grant.
Hexalobus senegalensis, A. DC. Madi, Speke & Grant.
Chasmanthera dependens, Hochst. Unyoro, Speke & Grant.

Nymphæaceæ.

Nymphæa stellata, Willd. Congo Free State frontier, Doggett; Nile, 2° N. Speke & Grant; Uganda, very common, Wilson.
N. Lotus, L. Unyoro, Wilson; Nile, 2° N., Speke & Grant.

Cruciferæ.

Cardamine pratensis, L. Ruwenzori, Doggett.
Arabis alpina, L. Ruwenzori, Doggett.
Farsetia stenoptera, Hochst. Baringo, Johnston.

Capparidaceæ.

Cleome diandra, Hochst. Baringo, Johnston.
C. monophylla, L. Uganda, Wilson. T.L.S. xxix. t. 5, f. 1.
Gynandropsis pentaphylla, L. Uganda, Wilson.
Courbonia decumbens, A. Brongn. Madi, Speke & Grant.
Boscia salicifolia, Oliv. Madi, Speke & Grant.
Capparis spinosa, L., forma. Baringo, Johnston.
C. tomentosa, Lam., var. Madi, Speke & Grant.
Cratæva religiosa, Forst. Madi, Speke & Grant.

Violaceæ.

Viola abyssinica, Steud. Nandi Forest, Johnston.

Bixaceæ.

Cochlospermum niloticum, Oliv. Madi, Speke & Grant. T.L.S. xxix. t. 7, f. 1.
Flacourtia sp. 3° 15′ N., Speke & Grant.

Polygalaceæ.

Polygala acicularis, Oliv. Madi, Speke & Grant. T.L.S. xxix. t. 9, f. 1.
P. persicariæfolia, DC. Unyoro, Speke & Grant; Baringo, Johnston. T.L.S. xxix t. 8, f. 1.
Polygala sp. Ankole, Doggett.

Caryophyllaceæ.

Polycarpæa corymbosa, var. *effusa*, Oliv. Madi, Speke & Grant.

Portulacaceæ.

Portulaca oleracea, L. Unyoro, Speke & Grant.
Talinum cuneifolium, Willd. Unyoro, Speke & Grant; Baringo, Johnston.

Hypericaceæ.

Hypericum lanceolatum, Lam. Ruwenzori, Doggett; Nandi, Johnston.
Psorospermum febrifugum, Spach, var. Uganda, Wilson.

Guttiferæ.

Symphonia sp. Ruwenzori, Doggett.

Dipterocarpaceæ.

Lophira alata, Banks. Madi, Speke & Grant.

Malvaceæ.

Sida cordifolia, L. Unyoro, Speke & Grant; Uganda, Wilson.
S. rhombifolia, L. Unyoro Plateau, Speke & Grant.
S. schimperiana, Hochst. Uganda, Wilson.
S. spinosa, L. Unyoro, Speke & Grant.
Sida sp. Baringo, Johnston.
Wissadula rostrata, Planch. Uganda, Wilson.
Abutilon sp. Baringo, Johnston.
Urena lobata, L. Unyoro, Speke & Grant.
Pavonia kilimandscharica, Gürke. Baringo, Johnston.
P. macrophylla, E. Mey. Uganda, Speke & Grant.
Hibiscus articulatus, Hochst. Ruwenzori, Scott-Elliot; Unyoro, Speke & Grant. T.L.S. xxix. t. 13, f. 1.
H. esculentus, L. Unyoro, Speke & Grant.
H. Grantii, Mast. Bukedi, Ugani, and Madi, Speke & Grant; Toro, Doggett. T.L.S. xxix. t. 12, f. 1.
H. lunarifolius, Willd. Ruwenzori and Uganda, Scott-Elliot.
H. panduriformis, Burm. Unyoro, Speke & Grant; Berkeley, Scott-Elliot.
H. physaloides, Guill. & Perr. Madi, Speke & Grant.
H. Sabdariffa, L. Unyoro, Speke & Grant.
H. vitifolius, L. Ruwenzori, Scott-Elliot.
Gossypium barbadense, L. 3° N., Speke & Grant.
Adansonia digitata, L. 2° N., Speke & Grant.
Eriodendron anfractuosum, DC. 2° N., Speke & Grant.

Sterculiaceæ.

Sterculia cinerea, A. Rich. Madi, Speke & Grant.
Dombeya Mastersii, Hook. f. Chiope, Speke & Grant.
D. multiflora, Planch. Madi, Speke & Grant.
D. reticulata, Mast. 3° N., Speke & Grant. T.L.S. xxix. t. 15, f. 1.
Melhania ferruginea, A. Rich. Madi, Speke & Grant. T.L.S. xxix. t. 16, f. 1.

Tiliaceæ.

Grewia asiatica, L. Baringo, Johnston.
G. mollis, Juss. Toro, Doggett.
G. populifolia, Vahl, forma. Toro, Doggett.
Triumfetta annua, L. Unyoro, Speke & Grant.
Triumfetta sp., cf. *T. tomentosa*, Boj. Uganda, Wilson.
Corchorus olitorius, L. Uganda, Wilson.
C. trilocularis, L. Unyoro, Speke & Grant.

Zygophyllaceæ.

Tribulus terrestris, L. Baringo, Johnston.

Geraniaceæ.

Geranium aculeolatum, Camb. Ruwenzori, Doggett.
G. simense, Hochst. Nandi Plateau, Johnston.
Impatiens Ehlersii, Schweinf.? Ruwenzori, Doggett.

GERANIACEÆ—*(continued).*

Oxalis corniculata, L., forma. Uganda, Wilson.
O. (*Biophytum*) *sensitiva*, L. Unyoro, Speke & Grant.

Simarubaceæ.

Balanites ægyptiaca, Del. Madi, Speke & Grant.
Harrisonia abyssinica, Oliv. Madi, Speke & Grant. T.L.S. xxix. t. 18, f. 1.

Ochnaceæ.

Ochna sp ? Madi, Speke & Grant.

Burseraceæ.

Boswellia sp.? Madi, Speke and Grant.
Balsamodendron africanum, var. *abyssinica*, Oliv. Ugani, Speke & Grant.

Meliaceæ.

Trichilia emetica, Vahl. Madi, Speke & Grant. T.L.S. xxix. t. 20, f. 1.
Khaya senegalensis, A. Juss. Madi, Speke & Grant.
Soymida sp ? Madi, Speke & Grant.

Olacaceæ.

Ximenia americana, L. Madi, Speke & Grant.
Opilia amentacea, Roxb. Madi, Speke & Grant.

Celastraceæ.

Celastrus senegalensis, Lam. Madi, Speke & Grant; Uganda, Wilson.

Rhamnaceæ.

Rhamnus sp. 3° N., Speke & Grant.
Zizyphus jujuba, Lam. Madi, Speke & Grant.

Ampelideæ.

Vitis adenocaulis, Steud. Unyoro, Speke & Grant.
V. cornifolia, Baker. Madi, Speke & Grant. T.L.S. xxix. t. 22, f. 1.
V. cyphopetala, Fres. Unyoro, Speke & Grant.
V. quadrangularis, L. Unyoro, Speke & Grant; Baringo, Johnston.

Sapindaceæ.

Cardiospermum Halicacabum, L. Unyoro, Speke & Grant; Uganda, Wilson.
C. microcarpum, H. B. & K. Ruwenzori, Doggett.

Anacardiaceæ.

Rhus glaucescens, A. Rich. Madi, Speke & Grant; Uganda, Mau, and Nandi, Scott-Elliot; var. *Schimperi*, Oliv. Baringo, Johnston.
Odina fruticosa, Hochst. Madi, Speke & Grant.
Sclerocarya Birrea, Hochst. Madi, Speke & Grant.
Bersama sp., cf. *B. abyssinica*, Fres. Ruwenzori, Doggett.

Leguminosæ.

Crotalaria atrorubens, Hochst. Kavirondo, Scott-Elliot.
C. calycina, Schrank. Unyoro, Speke & Grant.
C. cephalotes, Steud. Madi, Speke & Grant; Uganda, Wilson.
C. glauca, Willd. Unyoro, Speke & Grant.
C. hyssopifolia, Klotzsch. Mau, Scott-Elliot.
C. incana, L. Uganda, Wilson.
C. intermedia, Kotschy. 2° N., Speke & Grant.
C. laburnifolia, L. Ruwenzori, Scott-Elliot; Baringo, Johnston.
C. natalitia, Meisn. Ruwenzori and Uganda, Scott-Elliot.

LEGUMINOSÆ—*(continued).*

Crotalaria recta, Steud. Uganda, Wilson.
C. spinosa, Hochst. Ankole, Lake Albert Edward, and Ruwenzori, Scott-Elliot.
C. striata, DC. Uganda, Wilson.
Parochetus communis, Ham. Ruwenzori, Doggett.
Trifolium africanum, Ser.? Nandi Plateau, Johnston.
T. subrotundum, Steud. Nandi Plateau, Johnston.
Indigofera arrecta, Hochst. Ruwenzori, Scott-Elliot.
I. capitata, Kotschy. Madi, Speke & Grant.
I. endecaphylla, Jacq. Uganda, Scott-Elliot.
I. hirsuta, L. Unyoro, Speke & Grant.
I. macrocarpa, Lepr. Ruwenzori, Scott-Elliot.
I pentaphylla, L. Madi, Speke & Grant; Lake Elmenteita and Mau, Scott-Elliot.
I. secundiflora, Poir. Unyoro, Speke & Grant; Kavirondo, Scott-Elliot.
I. stenophylla, Guill. & Perr. Madi, Speke & Grant.
I. subulata, Vahl. Uganda, Scott-Elliot.
Tephrosia dichroocarpa, Steud. Ruwenzori, Doggett.
T. longipes. Uganda, Wilson.
T. polysperma, Baker. Uganda, Speke & Grant. T.L.S. xxix. t. 30, f. 1.
T. rigida, Baker. Madi, Speke & Grant.
T. villosa, Pers. Nandi, Scott-Elliot.
T. Vogelii, Hook. f. Ruwenzori and Uganda, Scott-Elliot; Unyoro, Speke & Grant. T.L.S. xxix. t. 31, f. 1.
Tephrosia spp. Uganda, Wilson.
Milletia sp. Ankole, Doggett.
Sesbania ægyptiaca, Pers. Madi, Speke & Grant.
S. pubescens, DC. Baringo, Johnston.
Astragalus venosus, Hochst. Uganda, Speke & Grant.
Herminiera Elaphroxylon, Guill. & Perr. Upper Nile, 3° to 8° N., Speke & Grant; shallow water of Lake Victoria Nyanza, Johnston.
Æschynomene indica, L. Unyoro, Speke & Grant.
Æschynomene sp. Ruwenzori, Doggett.
Arachis hypogæa, L. Cultivated to a small extent from 7° S. to 2° N., Speke & Grant.
Zornia diphylla, Pers. Uganda, Wilson; Unyoro, Speke & Grant.
Desmodium lasiocarpum, DC. Uganda and Ruwenzori, Scott-Elliot.
Desmodium spp. Uganda, Wilson.
Pseudarthria Hookeri, W. & A. Uganda, Wilson; Unyoro, Speke & Grant.
Pseudarthria sp. Uganda, Wilson.
Uraria picta, Desv. Madi, Speke & Grant.
Abrus Schimperi, Hochst. Madi, Speke & Grant.
Glycine javanica, L. Uganda, Wilson.
Teramnus labialis, Spreng. Unyoro, Speke & Grant.
Canavalia ensiformis, DC. Chiope, Speke & Grant.
Vigna luteola, Benth. Kavirondo, Scott-Elliot.
V. nilotica, Hook. f. 2° N., Speke & Grant.
V. vexillata, Benth. Ruwenzori, Scott-Elliot.
Dolichos Lablab, L. Unyoro, Speke & Grant.
D. shuterioides, Baker. Toro, Doggett.
Dolichos sp.? Madi, Speke & Grant.
Cajanus indicus, Spreng. Unyoro, Speke & Grant.

LEGUMINOSÆ—*(continued).*

Rhynchosia Grantii, Baker. Unyoro, Speke & Grant.
R. viscosa, DC. Uganda, Wilson; Unyoro, Speke & Grant.
Eriosema Elliotii, Baker f. Nandi, Scott-Elliot.
E. flemingioides, Baker. Madi, Speke & Grant. T.L.S. xxix. t. 34, f. 1.
E. parviflorum, E. Mey. Berkeley Bay, Victoria Nyanza, Scott-Elliot.
Dalbergia melanoxylon, Guill. & Perr. Madi, Speke & Grant.
Lonchocarpus laxiflorus, Guill. & Perr. Madi, Speke & Grant.
Swartzia madagascariensis, Desv. Madi, Speke & Grant.
Cordyla africana, Lour. Six miles south of Gondokoro, Speke & Grant.
Parkinsonia aculeata, L. Gondokoro (introduced), Speke & Grant.
Cassia didymobotrya, Fres. Uganda, Wilson; Madi, Speke & Grant.
C. Kirkii, Oliv. Uganda, Wilson.
C. mimosoides, L. Unyoro, Speke & Grant.
C. Tora, L. Uganda, Wilson; Unyoro, Speke & Grant.
Bauhinia fassoglensis, Kotschy. Baringo, Johnston.
B. reticulata, DC. Uganda, Wilson; Unyoro, Speke & Grant.
Detarium senegalense, Gmel. Madi, Speke & Grant.
Cynometra sp. Toro, Doggett.
Mimosa asperata, L. Madi, Speke & Grant.
Acacia Catechu, Willd. Madi, Speke & Grant.
A. hecatophylla, Steud. Madi, Speke & Grant.
A. sieberiana, DC. Madi. Speke & Grant.
A. stenocarpa, Hochst. Madi, Speke & Grant.
Acacia sp. Uganda, Wilson.
Albizzia rhombifolia, Benth.? Madi, Speke & Grant.

Rosaceæ.

Rubus rigidus, Sm. Nandi Forest, Johnston.
Rubus sp. Ruwenzori, Doggett.
Alchemilla sp. Near El Burgan, Johnston.
Alchemilla sp. Ruwenzori, Doggett.

Crassulaceæ.

Bryophyllum calycinum, Salisb. Madi, Speke & Grant.
Kalanchoe sp. Ravine, Johnston.
Kalanchoe sp. Baringo, Johnston.
Kalanchoe sp. Toro, Doggett.

Hamamelidaceæ.

Trichocladus malosanus, Baker. Nandi Forest, Johnston.

Combretaceæ.

Terminalia macroptera, Guill. & Perr. Madi, Speke and Grant.
Terminalia sp. Baringo, Johnston.
Anogeissus leiocarpus, Guill. & Perr. Bari country, 4° N., Speke & Grant.
Combretum capituliflorum, Fenzl. Madi, Speke & Grant. T.L.S. xxix. t. 38, f. 1.
C. collinum, Fres. Madi, Speke & Grant.
C. glutinosum, Guill. & Perr. Madi, Speke & Grant.
C. petitianum, A. Rich. Madi, Speke & Grant.
C. racemosum, P. Beauv. Lake Nyabukere, Doggett.
C. reticulatum, Fres. Madi, Speke & Grant.

COMBRETACEÆ—*(continued)*.

Combretum sp. Mau Plateau, Johnston.
Cacoucia paniculata, Laws. Baringo, Johnston.

Myrtaceæ.

Eugenia ovariensis, P. Beauv. Madi, Speke & Grant.

Melastomaceæ.

Osbeckia sp. Uganda, Wilson.
Dissotis petiolata, Hook. f. Madi, Speke & Grant.
Dissotis sp. Uganda, Wilson.

Lythraceæ.

Nesæa cordata, Hiern. Madi, Speke & Grant.
Lythrum rotundifolium, Hochst. Nandi Plateau, Johnston.
Ammania senegalensis, Lam. Madi, Speke & Grant.
Jussiæa diffusa, Forsk. Uganda, Wilson; Unyoro, Speke & Grant.
J. pilosa, H. B. & K. On the Nile, 4° N., Speke & Grant.
J. villosa, Lam. Bukedi and Madi, Speke & Grant.
Ludwigia parviflora, Roxb. Unyoro, Speke & Grant.
L. prostrata, Roxb. Uganda, Wilson.

Onagrariaceæ.

Epilobium hirsutum, L. Ruwenzori, Scott-Elliot; Lake Naivasha, Johnston.
Trapa natans, L. Floating on the Nile at 2° N., shores of the Victoria Nyanza at the equator, and Katonga River, Speke & Grant.

Cucurbitaceæ.

Lagenaria vulgaris, Ser. Unyoro, Speke & Grant.
Momordica Morkorro, A. Rich. Ukidi, Speke & Grant.
Cucurbita maxima, Duch. Unyoro, Speke & Grant.
Bryonopsis laciniosa, Arn. Unyoro, Speke & Grant.
Melothria triangularis, Benth. Unyoro, Speke & Grant.

Begoniaceæ.

Begonia sp. Ruwenzori, Doggett.

Umbelliferæ.

Hydrocotyle natans, Cyr. Unyoro, Speke & Grant.
Alepidea amatimbica, Eckl. & Zeyh. Kavirondo, Scott-Elliot, Johnston.
Trachydium abyssinicum, Benth. & Hook. f. Nandi Plateau, Johnston.
Diplolophium abyssinicum, Benth. & Hook. f. Uganda, Wilson; Madi, Speke & Grant.
Peucedanum fraxinifolium, Hiern. Madi, Speke & Grant. T.L.S. xxix. t. 42, f. 1.
P. Grantii, Kingston. Unyoro, Speke & Grant. T.L.S. xxix. t. 43, f. 1.
Anthriscus dissectus, C. H. Wright. Ruwenzori, Doggett.

Rubiaceæ.

Sarcocephalus Russeggeri, Kotschy. Madi, Speke & Grant.
Hymenodictyon sp? Madi, Speke & Grant.
Crossopteryx kotschyana, Fenzl. Madi, Speke & Grant.
Pentas Ainsworthii, Scott-Elliot. Western Uganda, Doggett.
P. occidentalis, Benth. & Hook. f. Ruwenzori, Doggett.
P. quartiniana, Hook. f. Madi and Bukedi, Speke & Grant. T.L.S. xxix. t. 46, f. 1.
P. Thomsonii, Scott-Elliot. Nandi, Scott-Elliot, Johnston.

RUBIACEÆ—*(continued).*

Pentas sp. Toro, Doggett.
Pentas sp. Uganda, Wilson.
Virecta sp., cf. *V. multiflora*, Sm. Ankole, Doggett.
Otomeria madiensis, Oliv. Madi, Speke & Grant. T.L.S. xxix. t. 47, f. 1.
Hedyotis sp.? Uganda, Wilson.
Oldenlandia abyssinica, Hiern. Congo Forest, Doggett.
O. Heynei, W. & A. Uganda, Speke & Grant.
Mussænda erythrophylla, Sch. & Thonn. Ruwenzori, Doggett.
M. luteola, Del. Gani and Madi, Speke & Grant.
Randia dumetorum, Lam.? Madi, Speke & Grant.
Gardenia lutea, Fres. Madi, Speke & Grant.
G. Thunbergia, L. f. Uganda, Wilson.
Tricalysia sp.? Madi, Speke & Grant.
Plectronia venosa, Oliv. Madi, Speke & Grant. T.L.S. xxix. t. 49, f. 1.
Canthium sp. Baringo, Johnston.
Vangueria sp.? Madi, Speke & Grant.
Ixora spp.? Madi, Speke & Grant.
Coffea arabica, L. Waichiru, near Lake Victoria Nyanza, Speke & Grant.
Rytidea sp.? Uganda, Wilson.
Anthospermum sp. Nandi Forest, Johnston.
Spermacoce ampliata, Oliv. Unyoro, Speke & Grant. T.L.S. xxix. t. 54, f. i.
S. hebecarpa, Oliv.? Ukidi, Speke & Grant.
S. kotschyana, Oliv. Madi, Speke & Grant. T.L.S. xxix. t. 53, f. 1.
S. sphænostigma, A. Rich.? Uganda, Wilson.
S. stricta, L. f. Bukedi Forest, Speke & Grant.
Mitracarpum senegalense, DC. Unyoro, Speke & Grant.
Rubia cordifolia, L. Uganda, Wilson; Mau, Johnston.

Dipsaceæ.

Scabiosa Columbaria, L. Nandi Plateau, Johnston.

Compositæ.

Gutenbergia cordifolia, Benth. Unyoro, Speke & Grant.
Bothriocline Schimperi, Oliv. & Hiern. Uganda, Wilson.
Vernonia ambigua, Kotschy & Peyr. Madi, Speke & Grant.
V. cinerea, Less. Uganda, Wilson.
V. Grantii, Oliv. Unyoro, Speke & Grant. T.L.S. xxix. t. 57, f. 1.
V. hymenolepis, A. Rich. Ruwenzori, Doggett.
V. Perrottetii, Sch. Bip. Madi, Speke & Grant.
V. pumila, Kotschy & Peyr. Uganda, Wilson; Madi, Speke & Grant.
V. purpurea, Sch. Bip. Madi, Speke & Grant.
V. thomsoniana, Oliv. & Hiern. Madi, Speke & Grant.
V. turbinata, Oliv. & Hiern. Madi, Speke & Grant.
V. violacea, Oliv. & Hiern. Uganda, Wilson; Madi, Speke & Grant.
Vernonia spp. Uganda, Wilson.
Vernonia sp. Western Ankole, Doggett.
Adenostemma viscosum, Forst., forma. Uganda, Wilson.
Ageratum conyzoides, L. Uganda, Wilson; Unyoro, Speke & Grant.
Felicia abyssinica, Sch. Bip. Mau Plateau, Johnston.
Erigeron Grantii, Oliv. & Hiern. Unyoro, Speke & Grant. T.L.S. xxix. t. 58, f. 1.
Conyza ægyptiaca, Ait. Unyoro, Speke & Grant.

COMPOSITÆ—*(continued).*

Conyza Newii, Oliv. & Hiern. Nandi, Johnston.
Conyza sp. Uganda, Wilson.
Tarchonanthus camphoratus, L. Mau Plateau, Johnston.
Blumea lacera, DC. Uganda, Wilson; Unyoro, Speke & Grant.
Laggera alata, Sch. Bip. Unyoro, Speke & Grant.
L. pterodonta, Sch. Bip. Unyoro, Speke & Grant.
Sphæranthus cyathuloides, O. Hoffm. Baringo, Johnston.
S. suaveolens, DC. Madi, Speke & Grant.
Helichrysum declinatum, Less. Nandi Plateau, Johnston.
H. elegantissimum, DC. Ruwenzori, Doggett.
H. undatum, Less. Uganda, Wilson.
Helichrysum sp. Nandi, Johnston.
Helichrysum sp. Ankole, Doggett.
Athrixia rosmarinifolia, Oliv. & Hiern. Nandi Forest, Johnston.
Anisopappus chinensis, Hook. & Arn. Madi, Speke & Grant. T.L.S. xxix. t. 64, f. B.
Siegesbeckia orientalis, L. Uganda, Wilson.
Aspilia Kotschyi, Benth. & Hook. f. Uganda, Speke & Grant, Wilson.
Aspilia sp. Uganda, Wilson.
Coreopsis Steppia, Steetz. Ruwenzori, Doggett.
Coreopsis sp. Nandi Plateau, Johnston.
Coreopsis sp. Mau, Scott-Elliot.
Coreopsis sp. Kavirondo, Scott-Elliot.
Coreopsis sp. Gani, Speke & Grant.
Chrysanthellum indicum, DC. Unyoro, Speke & Grant.
Chrysanthemum procumbens, Pers. Uganda, Wilson.
Gynura vitellina, Benth. Uganda, Wilson.
Emilia integrifolia, Baker. Mau, Scott-Elliot; Nandi Plateau, Johnston.
Notonia abyssinica, A. Rich. Uganda, Wilson.
N. Grantii, Oliv. & Hiern. Nandi, Johnston.
Senecio discifolia, Oliv. Uganda, Speke & Grant, Wilson.
S. Mannii, Hook. f. Kivata, Ruwenzori, Scott-Elliot; var., Nandi Forest, Johnston.
S. sarmentosa, O. Hoffm. Nandi Plateau, Johnston.
Senecio sp. Unyoro, Speke & Grant.
Senecio spp. Ruwenzori, Doggett.
Berkheya spekeana, Oliv. Uganda, Wilson; Unyoro and Madi, Speke & Grant. T.L.S. xxix. t. 66, f. 1.
Echinops amplexicaulis, Oliv. Uganda, Wilson.
E. longifolius, A. Rich. Madi, Speke & Grant.
Echinops sp. Toro, Doggett.
Gerbera lasiopus, Baker. Toro, Doggett; Nandi Plateau, Johnston.
G. piloselloides, Cass. Nandi, Scott-Elliot.
Sonchus oleraceus, L. Unyoro, Speke & Grant.

Campanulaceæ.

Lobelia Deckenii, Hemsl. Ruwenzori, Doggett; Nandi Plateau, Johnston.
L. Giberroa, Hemsl. Ruwenzori, Doggett.
L. Stuhlmanni, Schweinf. Ruwenzori, Doggett, Scott-Elliot.
Lobelia sp. Mau and Nandi Plateau, Johnston.

CAMPANULACEÆ—*(continued)*.

Lobelia sp. Nandi Plateau, Johnston.
Cephalostigma sp. Nandi Plateau, Johnston.
Lightfootia abyssinica, L. Ruwenzori and Kavirondo, Scott-Elliot.

Ericaceæ.

Erica arborea, L. Ruwenzori, Scott-Elliot, Doggett; Nandi Forest, Johnston.
Philippia sp. Ruwenzori, Doggett.

Myrsinaceæ.

Embelia nilotica, Oliv. Madi, Speke & Grant. T.L.S. xxix. t. 71, f. 1.

Sapotaceæ.

Chrysophyllum sp. Madi, Speke & Grant.
Chrysophyllum sp.? 5° S. to 3° 15′ N., Speke & Grant.
Mimusops Kummel, Hochst. Madi, Speke & Grant.
Butyrospermum Parkii, Kotschy. (*Bassia Parkii*, G. Don. T.L.S. xxix. t. 73, f. 1 Madi, Speke & Grant.)

Ebenaceæ.

Euclea Divinorum, Hiern. Uganda, Wilson.

Oleaceæ.

Jasminum abyssinicum, R. Br. Mau, Scott-Elliot.
J. floribundum, R. Br. Naivasha, Johnston.
Linociera nilotica, Oliv. Madi, Speke & Grant. T.L.S. xxix. t. 117, f. 1.
Olea chrysophylla, Lam. Ruwenzori and Mau, Scott-Elliot; Nandi Forest, Johnston.

Apocynaceæ.

Landolphia florida, Benth. Uganda, Wilson; Madi, Speke & Grant.
Carissa sp. Uganda, Wilson.
Carissa sp. Madi, 3° N., Speke & Grant.
Adenium speciosum, Fenzl. Bari country, Speke & Grant.

Asclepiadaceæ.

Tacazzea apiculata, Oliv. Madi and Gondokoro, Speke & Grant. T.L.S. xxix. t. 72, f. 1.
Toxocarpus africanus, Oliv. Unyoro, Speke & Grant. T.L.S. xxix. t. 118, f. A.
Gomphocarpus fruticosus, R. Br. Unyoro, Speke & Grant.
G. physocarpus, E. Mey. Uganda, Wilson; Madi, Speke & Grant.
G. robustus, A. Rich. Unyoro, Speke & Grant.
Gomphocarpus sp. Uganda, Wilson.
Calotropis procera, R. Br. 3° 15′ N., Speke & Grant; Baringo, Johnston.
Asclepias glaberrima, Schltr. Baringo, Johnston.
A. macrantha, Hochst. Ruwenzori, Doggett.
Asclepias sp. Uganda, Wilson.
Margaretta rosea, Oliv. Uganda, Wilson; Unyoro, Speke & Grant. T.L.S. xxix. t. 76, f. 1.
Marsdenia spissa, S. Moore, var. Baringo, Johnston.
Dæmia extensa, R. Br. 2° N., Speke and Grant.
Leptadenia lancifolia, Decsne. Madi, Speke & Grant
Brachystelma Johnstoni, N. E. Br. Nandi, Johnston.

Loganiaceæ.

Strychnos sp. Madi and Unyoro, Speke & Grant.

Gentianaceæ.

Belmontia grandis, E. Mey. Ankole, Doggett.
Faroa sp. Uganda, Wilson.
Octopleura lœselioides, var. *compacta*, Oliv. Madi, Speke & Grant. T.L.S. xxix. t. 78, f. A.

Boraginaceæ.

Coldenia procumbens, L. Madi, Speke & Grant.
Heliotropium zeylanicum, Lam. Baringo and Naivasha, Johnston.
Cynoglossum cœruleum, Hochst. Ruwenzori, Doggett; Nandi Plateau, Johnston.

Convolvulaceæ.

Argyreia populifolia, var. *africana*, Oliv. Chiope, Speke & Grant.
Ipomœa Batatas, Lam. "Cultivated all the way from Zanzibar to Egypt," Speke & Grant.
I. capitata, Choisy. Madi, 3° 15′ N., Speke & Grant.
I. commatophylla, var. *angustifolia*, Oliv. 2° N., Speke & Grant.
I. Grantii, Oliv. Unyoro, Speke & Grant. T.L.S. xxix. t. 80, f. 1.
I. involucrata, P. Beauv. Unyoro, Speke & Grant.
I. pinnata, Hochst. Madi, Speke & Grant.
I. sessiliflora, Choisy? Uganda, Wilson.
Hewittia bicolor, W. & A. Unyoro, banks of the Nile, Speke & Grant.
Convolvulus malvaceus, Oliv. Chiope, 1° 40′ N., Speke & Grant.
Evolvulus alsinoides, L. Unyoro, Speke & Grant; var., Uganda, Wilson.
E. dichondroides, Oliv. Uganda, Speke & Grant. T.L.S. xxix. t. 78, f. B.
Cuscuta obtusiflora, H. B. & K. Mau, Scott-Elliot; Nandi Forest, Johnston.
Cuscuta sp. Baringo, Johnston.

Solanaceæ.

Solanum duplosinuatum, Klotzsch. Unyoro, Speke & Grant.
S. giganteum, Jacq. Uganda, Wilson.
S. hastifolium, Hochst. Baringo, Johnston.
S. nodiflorum, Jacq. Uganda, Wilson.
S. runsoriense, C. H. Wright. Ruwenzori, Doggett.
Physalis æquata, Jacq. f. Unyoro, Speke & Grant.
Physalis sp. Uganda, Wilson.
Capsicum conicum, var. *orientale*, DC. Unyoro, Speke & Grant.
Withania somnifera, Dun. Uganda, Wilson; Madi, 3° 15′ N., Speke & Grant.
Nicotiana Tabacum, L. "Cultivated from 7° S. to 4° N.," Speke & Grant.

Scrophulariaceæ.

Herpestis floribunda, R. Br. Madi, 3° 15′ N., Speke & Grant.
Dopatrium macranthum, Oliv. Madi, 3° 15′ N., Speke & Grant. T.L.S. xxix t. 121, f. A.
Vandellia lobelioides, Oliv. Madi, Speke & Grant. T.L.S. xxix. t. 121, f. B.
Bonnaya trichotoma, Oliv. Madi, Speke & Grant. T.L.S. xxix. t. 122, f. B.
Veronica africana, Hook. f. Ruwenzori, Scott-Elliot; Nandi Plateau, Johnston.
Striga Forbesii, Benth. Uganda, Wilson.

SCROPHULARIACEÆ—*(continued).*

Striga hermonthica, Benth. Unyoro, Speke & Grant.
Rhamphicarpa fistulosa, Benth. Madi, Speke & Grant.
R. Heuglinii, Hochst. Baringo, Johnston.
Rhamphicarpa sp. Uganda, Wilson.
Cycnium adonense, E. Mey. Uganda, Wilson; Madi, Speke & Grant; Nandi, Scott-Elliot; var. *adscendens*, Oliv. Unyoro, Speke & Grant. T.L.S. xxix. t. 88, f. 1.
C. herzfeldianum, Engl. Buddu, Scott-Elliot.
Cycnium sp. Nandi, Johnston.
Sopubia lanata, Engl. Nandi, Scott-Elliot.
S. ramosa, Hochst. Ruwenzori, Scott-Elliot; Uganda, Wilson; Madi, Speke & Grant.

Lentibulariaceæ.

Utricularia inflexa, Forsk. Nile, 2° N., Speke & Grant.
U. reflexa, Oliv. Unyoro, Speke & Grant.

Gesneraceæ.

Streptocarpus caulescens, Vatke. Ruwenzori, Doggett.

Bignoniaceæ.

Stereospermum dentatum, A. Rich. Madi, Speke & Grant.
Spathodea nilotica, Seem.
Spathodea sp. Unyoro, Speke & Grant.
Spathodea sp. Uganda, Wilson.
Spathodea sp.? Madi, 3° 15′ N., Speke & Grant.
Kigelia pinnata, DC. Madi, 3° N., Speke & Grant.

Acanthaceæ.

Thunbergia sericea, Burkill. Nandi, Scott-Elliot.
T. Gibsoni, S. Moore. Mau, Gibson; Nandi Plateau, Johnston.
T. alata, var. *vixalata*, Burkill. Ruwenzori, Scott-Elliot.
Nelsonia campestris, R. Br. Ruwenzori and Uganda, Scott-Elliot.
Brillantaisia Nyanzarum, Burkill. Kavirondo, Scott-Elliot.
B. cicatricosa, Lindau. Ruwenzori, Stuhlmann.
B. patula, T. Anders. (*B. alata*, T. Anders. T.L.S. xxix. t. 124, f. 1). Uganda and Unyoro, Speke & Grant.
Mellera lobulata, S. Moore. East side of Lake Albert Edward Nyanza, Scott-Elliot.
Mimulopsis spathulata, C. B. Cl. Mau, Scott-Elliot.
M. runssorica, Lindau. Ruwenzori, Stuhlmann.
M. Elliotii, C. B. Cl. Ruwenzori, Scott-Elliot.
M. arborescens, C. B. Cl. Ruwenzori, Scott-Elliot.
Whitfieldia longifolia, T. Anders. Sese Islands, Lake Victoria Nyanza, Stuhlmann.
Dyschoriste depressa, Nees. Mau, Scott-Elliot.
D. radicans, Nees. Uganda, Stuhlmann.
Dyschoriste sp. Baringo, Johnston.
Phaylopsis longifolia, T. Thoms. East side of Lake Albert Edward, Scott-Elliot; Madi, Speke & Grant.
P. Poggei, C. B. Cl. East side of Lake Albert Nyanza, Scott-Elliot.
Blepharis molluginifolia, Pers. Ruwenzori, Scott-Elliot.

ACANTHACEÆ—*(continued).*

Acanthus arboreus, Forsk. Lake Victoria Nyanza, Stuhlmann; Uganda, Wilson; Nandi, Scott-Elliot.

A. eminens, C. B. Cl. Mau, Scott-Elliot; Nandi Forest, Johnston.

Crossandra nilotica, Oliv. Madi, Speke & Grant; Lake Rudolf, Donaldson Smith. T.L.S. xxix. t. 85, f. 1.

C. mucronata, Lindau. Lake Victoria Nyanza and east side of Albert Edward, Scott-Elliot.

C. subacaulis, C. B. Cl. Baringo, Johnston.

Lepidagathis ampliata, C. B. Cl. Kavirondo, Scott-Elliot.

L. diversa, C. B. Cl. (*L. mollis*, Oliv.). Madi, Speke & Grant.

L. andersoniana, Lindau. Uganda, Stuhlmann.

Asystasia Schimperi, T. Anders. Uganda, Scott-Elliot; var. *Grantii*, C. B. Cl. Unyoro, Speke & Grant.

Barleria Grantii, Oliv. Nile about 2° N., Speke & Grant. T.L.S. xxix. t. 127, f. 1.

B. vixdentata, C. B. Cl. Uganda, Wilson; Ruwenzori, Kavirondo, and Mau, Scott-Elliot.

B. Stuhlmanni, Lindau. Mau, Scott-Elliot.

B. micrantha, C. B. Cl. East side of Lake Albert Edward, Scott-Elliot.

Eranthemum subviscosum, C. B. Cl. Uganda, Stuhlmann.

E. ardisioides, C. B. Cl. Uganda, Scott-Elliot.

Monothecium glandulosum, Hochst. East side of Lake Albert Edward, Scott-Elliot.

Justicia flava, Vahl. East side of Albert Edward, Scott-Elliot; Uganda, Stuhlmann; Kavirondo, Scott Elliot.

J. leikipiensis, S. Moore (*J. neglecta*, T. Anders.). Uganda, Wilson; Unyoro, Speke & Grant.

J. pinguior, C. B. Cl. Ruwenzori, Scott-Elliot, Doggett.

J. Whytei, S. Moore. Lake Naivasha, Scott-Elliot.

J. melampyrum, S. Moore. Ruwenzori, Scott-Elliot.

J. heterocarpa, T. Anders. Near Lake Elmenteita, Scott-Elliot.

J. anselliana, T. Anders. Madi, Speke & Grant; Nandi Plateau, Johnston; Kariandusi River, near Lake Elmenteita, Scott-Elliot; Kamásia, west of Lake Baringo, Gregory.

J. matammensis, Oliv. Buddu (Buganga), Scott-Elliot.

J. uncinulata, Oliv. Uganda, Stuhlmann; var. *tenuicapsa*, C. B. Cl Kariandusi River, Mau, and near Lake Naivasha, Scott-Elliot.

Monechma hispidum, Hochst. (*Schwabea ciliaris*, Nees). Madi, Speke & Grant.

M. bracteatum, Hochst. (*Justicia debilis*, Vahl). Near Lake Baringo, Gregory.

M. scabrinerve, C. B. Cl. Near Lake Elmenteita, Scott-Elliot.

Isoglossa lactea, Lindau. Toro, Kivata, Scott-Elliot.

I. runssorica, Lindau. Toro, Scott-Elliot.

I. substrobilina, C. B. Cl. Mau, Scott-Elliot.

I. rubescens, Lindau. Ruwenzori, Scott-Elliot.

Hypoestes triflora, Roem. & Sch. Ruwenzori, Scott-Elliot, Doggett; Nandi Plateau, Johnston.

H. verticillaris, R. Br. Toro, Scott-Elliot; Baringo, Johnston.

Dicliptera laxata, C. B. Cl. Kavirondo, Samia, Scott-Elliot.

D. nilotica, C. B. Cl. Madi, Speke & Grant.

Selaginaceæ.

Hebenstreitia dentata, L. Nandi Plateau, Johnston, Scott-Elliot.

Verbenaceæ.

Lantana salvifolia, Jacq. Uganda, Wilson; var. *ternifolia*, Baker. Toro Doggett.
Lippia adoensis, Hochst. Uganda, Wilson.
Verbena officinalis, Linn. Ruwenzori, Scott-Elliot.
Premna sp. Ruwenzori, Doggett.
Clerodendron Johnstoni, Oliv. Ruwenzori, Scott-Elliot.
C. cordifolium, A. Rich. Unyoro and Madi, Speke & Grant.
C. rotundifolium, Oliv. Ruwenzori, Scott-Elliot. T.L.S. xxix. t. 89.
C. myricoides, R. Br. Toro, Doggett; Uganda, Scott-Elliot; Nandi Plateau, Johnston; var. *discolor*, Baker. Uganda, Wilson.
Vitex simplicifolia, Oliv. Madi, Speke & Grant. T.L.S. xxix. t. 130, f. 1.
V. madiensis, Oliv. Madi, Speke & Grant. T.L.S. xxix. t. 131, f. 1.
V. Cienskowskii, Kotschy & Peyr. Madi, Speke & Grant.
V. Fischeri, Gürke. Uganda, Scott-Elliot.

Labiatæ.

Ocimum canum, Sims. Unyoro, Speke & Grant.
O. capitatum, Baker. Nandi Plateau, Johnston.
Geniosporum paludosum, Baker. Uganda, Wilson.
G. affine, Gürke. Uganda, Stuhlmann.
Moschosma riparium. Hochst. Ruwenzori and Lake Nakuro, Scott-Elliot.
Acrocephalus cylindraceus, Oliv. Ruwenzori, Scott-Elliot; Unyoro, Speke & Grant. T.L.S. xxix. t. 132, f. 1.
A. cœruleus, Oliv. Bukedi, Speke & Grant; Kavirondo, Scott-Elliot. T.L.S. xxix. t. 133, f. 1.
A. lilacinus, Oliv. Uganda, Wilson. T.L.S. xxix. t. 134.
Hoslundia opposita, var. *decumbens*, Baker. Uganda, Wilson.
Pycnostachys stenostachys, Baker. Unyoro, Speke & Grant.
P. deflexifolia, Baker. Near Lake Elmenteita, Scott-Elliot.
P. reticulata, Benth. Unyoro: Bukedi, Speke & Grant.
P. decussata, Baker. Kavirondo, Scott-Elliot.
P. nepetæfolia, Baker. Kavirondo, Scott-Elliot.
P. Volkensii, Gürke. Ruwenzori, Stuhlmann.
P. ruwenzoriensis, Baker. Ruwenzori, Scott-Elliot.
P. oblongifolia, Baker. Toro, Scott-Elliot.
P. urticifolia, Hook. Ruwenzori, Scott-Elliot.
Æolanthus ambustus, Oliv. Madi, Speke & Grant. T.L.S. xxix. t. 136, f. B.
Æ. heliotropioides, Oliv. Unyoro, Speke & Grant; Kavirondo, Scott-Elliot. T.L.S. xxix. t. 82, f. 1.
Plectranthus stachyoides, Oliv. Madi, Speke & Grant. T.L.S. xxix. t. 81, f. 1.
P. ovatifolius, Oliv. Madi, Speke & Grant. T.L.S. xxix. t. 135, f. 1.
Plectranthus sp. Baringo, Johnston.
Coleus ruwenzoriensis, Baker. Ruwenzori, Scott-Eiliot.
C. lanuginosus, Hochst. Unyoro, Speke & Grant.
C. barbatus, Benth. Uganda, Wilson.
C. latifolius, var. *madiensis*, Baker (*C. latifolius*, Oliv.). Madi, Speke & Grant.
Hyptis brevipes, Poit. Uganda, Scott-Elliot; Madi, Speke & Grant.
H. spicigera, Lam. Gani, Speke & Grant.
H. pectinata, Poit. Madi, Speke & Grant.

LABIATÆ—*(continued).*

Micromeria biflora, Benth. Ruwenzori, Scott-Elliot; south of Lake Naivasha, Thomson.
Micromeria sp. Nandi Plateau, Johnston.
Leucas martinicensis, R. Br. Toro, Scott-Elliot.
L. glabrata, R. Br. Kamásia, Gregory.
L. calostachys, Oliv. Gani, Speke & Grant. T.L.S. xxix. t. 83.
Leucas sp. Nandi Forest, Johnston.
Leonotis nepetæfolia, R. Br. Uganda, Wilson.
L. velutina, var. *rugosa*, Baker. Near Lake Naivasha, Scott-Elliot.
L. Elliotii, Baker. Mau Forest, Scott-Elliot.
Tinnea æthiopica, Kotschy & Peyr. Unyoro and Madi, Speke & Grant; Nandi, Scott-Elliot.

Plantaginaceæ.

Plantago palmata, Hook. f. Mau, Scott-Elliot.

Nyctaginaceæ.

Boerhaavia diffusa, Linn. Baringo, Johnston; var., Unyoro, Speke & Grant.

Illecebraceæ.

Pollichia campestris, Sol. Naivasha, Johnston.

Amaranthaceæ.

Deeringia celosioides, R. Br. Baringo, Johnston.
Celosia argentea, L. Uganda, Speke & Grant, Wilson.
C. trigyna, Linn. Uganda, Wilson; 2° N., Speke & Grant.
Celosia sp. Congo Forest, Doggett.
Digera arvensis, Forsk. Baringo, Johnston.
Amaranthus Blitum, Linn. 3° N., Speke & Grant.
Cyathula cylindrica, Moq. Above Elmenteita, Scott-Elliot.
C. prostata, Bl. Uganda, Scott-Elliot.
Cyathula sp. Naivasha, Johnston.
Pupalia lappacea, Moq. Baringo, Johnston.
Psilotrichum sp. East side of Lake Albert Edward, Scott-Elliot.
Ærua lanata, Juss. Uganda, Speke & Grant.
Achyranthes argentea, Lam.? Uganda, Wilson.

Chenopodiaceæ.

Chenopodium album, Linn. Uganda, Wilson; Unyoro, Speke & Grant.
C. Botrys, Linn. Uganda, Scott-Elliot.
C. opulifolium, Schrad. Lubwa's, Scott-Elliot.
Chenopodium sp. Baringo, Johnston.

Phytolaccaceæ.

Phytolacca abyssinica, Hoffm. Uganda, Wilson.

Polygonaceæ.

Polygonum barbatum, Linn. Uganda, Wilson.
P. senegalense, Moq. Naivasha, Johnston.
P. tomentosum, Willd. Nile at 2° N., Speke & Grant.
Rumex abyssinicus, Jacq. Unyoro, 2° N., Speke & Grant.

Proteaceæ.

Protea madiensis, Oliv. Madi, Speke & Grant. T.L.S. xxix. t. 92, f. 1.

Thymelæaceæ.

Arthrosolen latifolius, Oliv. West Toro, Doggett.
Arthrosolen sp. Uganda, Wilson.
Gnidia involucrata, var. *apiculata*, Oliv. Madi, Speke & Grant.

Loranthaceæ.

Loranthus Fischeri, Engl. Mau Plateau, Johnston.

Euphorbiaceæ.

Euphorbia Antiquorum, Linn. "Common over the whole route," Speke & Grant
E. hochstetteriana, Pax. Mau, Scott-Elliot.
E. hypericifolia, Linn. Unyoro, Speke & Grant.
E. Stuhlmanni, Pax? Ruwenzori, Scott-Elliot.
E. Tirucalli, Linn.? 7° S. to 3° 30′ N., Speke & Grant.
Euphorbia sp. Nandi Forest, Johnston.
Synadenium Grantii, Hook. f. 3° 15′ N., Speke & Grant.
Synadenium sp. West Ankole, Doggett.
Bridelia micrantha, Baill. Madi, Speke & Grant.
B. scleroneura, Muell. Arg. Madi, Speke & Grant.
Phyllanthus pseudoniruri, Muell. Arg. 2° N., Speke & Grant.
Phyllanthus sp. 3° 15′ N., Speke & Grant.
Phyllanthus spp. Uganda, Wilson.
Hymenocardia acida, Tulasne. Madi, Speke & Grant. T.L.S. xxix. t. 94, f. 1.
Jatropha sp. Madi, Speke & Grant.
Croton niloticus, Muell. Arg. Madi, Speke & Grant. T.L.S. xxix. t. 95, f. 1.
Acalypha vahliana, Muell. Arg. Unyoro, Speke & Grant. T.L.S. xxix. t. 96, f. 1.
A. villicaulis, Hochst. Uganda, Wilson.
Acalypha sp. Madi, Speke & Grant.
Ricinus communis, L. Unyoro, Speke & Grant.

Urticaceæ.

Celtis integrifolia, Lam. Madi, Speke & Grant.
Ficus glumosus, Del.? Madi, Speke & Grant.
F. kotschyanus, Miq.? Madi, Speke & Grant.
F. Sycamorus, Linn. "Along the whole route," Speke & Grant.
Ficus sp. 3° 15′ N., Speke and Grant.
Ficus, sp. Madi, Speke & Grant.
Urtica dioica, Linn., var. Unyoro, Speke & Grant.
Fleurya æstuans, Gaud. Congo Forest, Doggett.

Ceratophyllaceæ.

Ceratophyllum sp. Unyoro, Speke & Grant.

Coniferæ.

Juniperus procerus, Hochst? Top of the Kedong Escarpment and forests north of Lake Naivasha, Sclater.
Podocarpus falcatus, R. Br. Nandi and Eldama Ravine, Johnston.
Podocarpus sp. Ruwenzori, Scott-Elliot.
Podocarpus sp. Ruwenzori, Doggett.

Cycadaceæ.

Encephalartos sp. Toro, Doggett.

Hydrocharidaceæ.

Hydrilla verticillata, Royle. Buddu, ex Engler.
Boottia abyssinica, Ridl. Madi, Speke & Grant.

Orchideæ.

Liparis ruwenzoriensis, Rolfe. Ruwenzori: Butagu, Scott-Elliot.
Eulophia milanjiana, Rendle. West Ankole, Doggett.
Eulophia sp. West Ankole, Doggett.
Eulophia sp. Nandi, Johnston.
Lissochilus parvulus, Rendle. Kavirondo, Scott-Elliot.
L. gracilior, var. *angusta*, Rendle. East of Lake Albert Edward, Scott-Elliot.
L. validus, var. *minor*, Rendle. Uganda: Kampala, Scott-Elliot.
L. livingstonianus, Reichb. f. Uganda, Wilson.
L. cornigerus, Rendle. East side of Lake Albert Edward, Scott-Elliot; var. *minor*, Rendle. Buddu, Scott-Elliot.
L. mediocris, Rendle. Kavirondo: Samia, Scott-Elliot.
L. arenarius, Lindl. East side of Lake Albert Edward, Scott-Elliot; Unyoro, Wilson.
L. Elliotii, Rendle. Ruwenzori: Ruimi River, Scott-Elliot.
L. ruwenzoriensis, Rendle. Ruwenzori, Scott-Elliot.
L. monticolus, Rendle. Ruwenzori, Scott-Elliot.
L. saccatus, Rendle. Nandi Hills, Scott-Elliot.
Pteroglossaspis ruwenzoriensis, Rolfe. Ruwenzori, Scott-Elliot.
Polystachya gracilenta, Kränzl. Ruwenzori, Stuhlmann.
P. nigrescens, Rendle. Ruwenzori: Ruimi and Butagu, Scott-Elliot.
P. simplex, Rendle. Ruwenzori: Ruimi, Scott-Elliot.
P. spatella, Kränzl. Ruwenzori, Stuhlmann.
P. Elliotii, Rendle. Ruwenzori, Scott-Elliot.
P. ruwenzoriensis, Rendle. Ruwenzori: Butagu, Scott-Elliot.
Polystachya sp. Ruwenzori, Doggett.
Angræcum Grantii, Batem. Madi, Speke & Grant.
A. Scottellii, Rendle. Ruwenzori and Butagu, Scott-Elliot.
Angræcum sp. Ankole, Doggett.
Listrostachys Virgula, Rolfe. Ruwenzori, Stuhlmann.
Epipactis africana, Rendle. Ruwenzori: Butagu, Scott-Elliot.
Deræmeria acuminata, Rendle & Schlechter. Nandi Hills, Scott-Elliot.
Brachycorythis pubescens, Harv. North-east of Kariandusi, Gregory.
Habenaria Rendlei, Rolfe. Ruwenzori, Scott-Elliot.
H. tenuispica, Rendle. Ruwenzori: Butagu, Scott-Elliot.
H. præstans, Rendle. Ruwenzori, Scott-Elliot.
H. ruwenzoriensis, Rendle. Ruwenzori: Ruimi, Scott-Elliot.
H. ingrata, Rendle. Ruwenzori, Scott-Elliot.
H. culicifera, Rendle. Ruwenzori, Scott-Elliot.
H. genuflexa, Rendle. Ruwenzori: Ruimi, Scott-Elliot.
Cynorchis anacamptoides, Kränzl. Ruwenzori, Stuhlmann; Butagu, Scott-Elliot.
Satyrium sacculatum, Rolfe. Ruwenzori: Butagu, Scott-Elliot.
S. mystacinum, Kränzl. Ruwenzori, Stuhlmann.
S. niloticum, Rendle. Nandi Range, Scott-Elliot.

ORCHIDEÆ—*(continued).*

Satyrium crassicaule, Rendle. Ruwenzori: Ruimi and Butagu, Scott-Elliot.
Disa erubescens, Rendle. Ruwenzori, Scott-Elliot.
D. Stairsii, Kränzl. Ruwenzori, Doggett; Butagu, Stairs, Scott-Elliot.
Disperis nemorosa, Rendle. Ruwenzori: Ruimi, Scott-Elliot.

Scitamineæ.

Costus afer, Ker. Uganda, Scott-Elliot.
Amomum angustifolium, Sonn. Semliki Valley and western foot of Ruwenzori, Scott-Elliot.
Donax ugandensis, Schum. Uganda, Scott-Elliot.
Musa Ensete, Gmel. Uganda, Scott-Elliot; Madi, Speke & Grant.

Hæmodoraceæ.

Sansevieria guineensis, Willd. Madi, Speke & Grant; Baringo, Johnston.
S. sulcata, Boj. Naivasha, Johnston.

Iridaceæ.

Aristea nandiensis, Baker. Nandi Range, Scott-Elliot.
Gladiolus quartinianus, A. Rich. Ruwenzori, Doggett; Uganda, Wilson.

Amaryllidaceæ.

Hypoxis villosa, Linn. f. East side of Lake Albert Edward, and Ruwenzori, Scott-Elliot.
Hæmanthus multiflorus, Martyn. Ruwenzori, Scott-Elliot.
Crinum yuccæflorum, Salisb. Madi, Speke & Grant.
Pancratium trianthum, Herb. Baringo, Johnston.

Dioscoreaceæ.

Dioscorea sativa, L. Unyoro, Speke & Grant.

Liliaceæ.

Smilax kraussiana, Meisn. Speke & Grant. T.L.S. xxix. t. 106, f. 1.
Asparagus Pauli-Gulielmi, Solms. Uganda, Wilson; Madi, Speke & Grant. T.L.S. xxix. t. 105, f. 1.
A. asiaticus, Linn. East side of Lake Albert Edward, and Andorobo near Lake Nakuro, Scott-Elliot.
A. africanus, Lam. Ruwenzori and Uganda, Scott-Elliot, Doggett.
A. racemosus, Willd. Madi, Speke & Grant.
A. falcatus, Linn. Berkeley Bay, Lake Victoria Nyanza, Scott-Elliot.
Dracæna fragrans, Gawl. Ruwenzori and Uganda, Scott-Elliot.
D. reflexa, var. *nitens*, Baker. Ruwenzori: Yeria Valley and Butagu Valley, Scott-Elliot.
D. elliptica, Thunb. & Dalm. Toro: Ruimi Valley, Scott-Elliot; Unyoro, Speke & Grant.
Aloe abyssinica, Lam. Unyoro, Speke & Grant.
Aloe sp. Baringo, Johnston.
Bulbine asphodelioides, R. & S. Baringo, Johnston.
Anthericum triflorum, Ait. Uganda, Lugard.
Chlorophytum blepharophyllum, Schweinf. Ruwenzori, Doggett.
Urginea micrantha, Solms. Madi, Speke & Grant.
U. nigritana, Baker. Uganda: Kampala, Scott-Elliot.

LILIACEÆ—*(continued).*

Ornithogalum Melleri, Baker. Nandi, Johnston.
Scilla indica, Baker. Nandi, Johnston.
S. mæsta, Baker. Nandi, Johnston.
Scilla sp. Ruwenzori, Doggett.
Androcymbium melanthoides, var. *striatum*, Baker. Between Lake Victoria Nyanza and Lake Baringo, Fischer.
Gloriosa virescens, Lindl. Ruwenzori, Doggett; Toro: Ruimi Valley, Scott-Elliot; Uganda, Wilson.

Pontederiaceæ.

Heteranthera kotschyana, Fenzl. Madi, Speke & Grant.
Eichornia natans, Solms (*Pontederia natans*, P. Beauv.). Madi, Speke & Grant.

Commelinaceæ.

Pollia condensata, C. B. Cl. Uganda, Scott-Elliot.
Palisota Schweinfurthii, C. B. Cl. Uganda: Kalungi, Scott-Elliot.
Commelina nudiflora, Linn. White Nile, Petherick.
C. Sabatieri, C. B. Cl. Sources of the White Nile, Sabatier.
C. benghalensis, Linn. Uganda: near Kampala, Scott-Elliot.
C. madagascarica, C. B. Cl. Ruwenzori: Kasagama, Scott-Elliot.
C. capitata, Benth. East side of Lake Albert Edward, Scott-Elliot.
C. firma, Rendle (*Cyanotis hirsuta*, Baker). Bukedi Forest, Speke & Grant.
Commelina sp. Baringo, Johnston.
Aneilema beniniense, Kunth. Ruwenzori: Butagu Valley, Scott-Elliot.
A. æquinoctiale, Kunth. Baringo, Johnston.
A. Smithii, C. B. Cl. Lake Rudolf, Donaldson Smith.
A. pedunculosum, C. B. Cl. Uganda, Scott-Elliot, Wilson; Toro: Ruimi River, Scott-Elliot.
Cyanotis longifolia, Benth. Unyoro, ex K. Schumann.
C. cæspitosa, Kotschy & Peyr. Nandi Hills, Scott-Elliot.
C. somaliensis, C. B. Cl. Ruwenzori, Scott-Elliot.
Floscopa rivularis, C. B. Cl. (*Lamprodithyros rivularis*, Hassk.). Ukidi, Speke & Grant.

Juncaceæ.

Juncus Fontanesii, J. Gay. Karia Ndusi, near Lake Elmenteita, Scott-Elliot.

Palmæ.

Phœnix reclinata, Jacq. Uganda: Kampala, Scott-Elliot, Stuhlmann.
Raphia Monbuttorum, Drude. Lakes Albert Edward and Albert Nyanza, ex Engler.
Borassus flabellifer, var. *æthiopum*, Warb. "About the equator," Speke & Grant.
Hyphœne thebaica, Mart. Uganda, rare, Speke & Grant.

Araceæ.

Arisæma ruwenzoricum, N. E. Br. Toro: Kivata, Scott-Elliot.
Colocasia Antiquorum, Schott. Uganda and Unyoro, Speke & Grant.
Culcasia scandens, P. Beauv. Uganda, Scott-Elliot.

Lemnaceæ.

Lemna æquinoctialis, Welw. Uganda: Manyonyo, Stuhlmann.

Alismaceæ.

Limnophyton obtusifolium, Miq. (*Sagittaria obtusifolia*, Linn.). Gondokoro, Speke & Grant. T.L.S. xxix. t. 102.

Naiadaceæ.

Aponogeton vallisnerioides, Baker. Ukidi, Speke & Grant.
Potamogeton lucens, Linn. In the Nile, Speke & Grant.
Naias marina, var. *muricata*, Al. Br. In the Albert Nyanza, Stuhlmann.

Eriocauloneæ.

Eriocaulon sp. Uganda, Wilson.

Cyperaceæ.

Kyllinga erecta, Sch. & Thonn. Ruwenzori, Scott-Elliot.
K. sphærocephala, Boeck. Unyoro, Speke & Grant.
K. melanosperma, Nees. Madi, Speke & Grant.
K. cylindrica, Nees. Ruwenzori, Scott-Elliot.
K. ruwenzoriensis, C. B. Cl. Ruwenzori: Kivata, Scott-Elliot.
K. albiceps, Rendle. Ruwenzori, Scott-Elliot.
Pycreus rehmannianus, C. B. Cl. West Ankole, Doggett.
P. nigricans, C. B. Cl. Nandi, Scott-Elliot.
P. Mundtii, Nees. Uganda, Stuhlmann.
P. globosus, var. *nilagirica*, C. B. Cl. Buddu, Scott-Elliot.
P. capillifolius, C. B. Cl. (*Cyperus flavescens*, T. Thoms.). Madi, Speke & Grant.
P. umbrosus, Nees. (*Cyperus nitidus*, Boeck.). Ruwenzori, Scott-Elliot
P. tremulus, C. B. Cl. Uganda, Stuhlmann.
Cyperus compactus, Lam. Lake Albert Nyanza, Stuhlmann; Lake Victoria Nyanza, Scott-Elliot; Nandi, Scott-Elliot.
C. reduncus, Boeck. Unyoro, Speke & Grant.
C. difformis, Linn. Lake Albert Nyanza, Stuhlmann; Madi, Speke & Grant.
C. flavidus, Retz. (*C. Haspan*, Rottb.). Unyoro, Speke & Grant.
C. tenax, Boeck. (*C. Grantii*, Boeck.). Uganda, Scott-Elliot.
C. fischerianus, Schimp. Ruwenzori: Butagu, Scott-Elliot.
C. cuspidatus, Humb. & Kth. Madi, Speke & Grant.
C. derreilema, Steud. Ruwenzori, Scott-Elliot.
C. aristatus, Rottb. Kamásia, Gregory.
C. distans, L. f. Ruwenzori, Scott-Elliot.
C. latifolius, Poir. Nandi Range, Scott-Elliot.
C. callistus, Ridley. Uganda, Wilson.
C. esculentus, L. Ruwenzori: Kivata, Scott-Elliot.
C. articulatus, L. East side of Lake Albert Edward, Scott-Elliot; Baringo, Johnston.
C. schweinfurthianus, Boeck. Semliki Valley, Scott-Elliot.
C. rotundus, L. Kamásia, Gregory; var. *spadiceus*, Boeck. Kamásia, Gregory.
C. rigidifolius, Stend. Marshes by Lake Nakuro, Scott-Elliot.
C. ibeensis, K. Schum. Uganda, Wilson.

CYPERACEÆ—*(continued).*

Cyperus exaltatus, var. *dives*, C B. Cl. Semliki Valley, Scott-Elliot; Buddu, Stuhlmann; Lake Baringo, Gregory, Johnston.

C. papyrus, L. Shallow borders of Lake Victoria Nyanza and banks of the Nile at 4° 56′ N., Speke & Grant; var. *Antiquorum*, C. B. Cl. Naivasha, Johnston.

Mariscus coloratus, Nees. Kamásia, Gregory; var. *macrocephala*, C. B. Cl. Uganda, Stuhlmann.

M. vestitus, C. B. Cl. Mau, Scott-Elliot.

M. sieberianus, Nees. Ruwenzori, Scott-Elliot; var. *evolutior*, C. B. Cl. Uganda, Stuhlmann.

M. macer, Kunth (*M. umbellatus*, Oliv., partly). Unyoro, Speke & Grant.

M. macrocarpus, Kunth (*M. umbellatus*, Oliv., partly). Uganda, Speke & Grant.

M. procerus, A. Rich. Lake Elmenteita, Scott-Elliot.

M. foliosus, C. B. Cl. Ruwenzori: Kivata, Scott-Elliot.

Courtoisia cyperoides, Nees. Malewa River, near Lake Naivasha, Gregory.

Eleocharis marginulata, Steud. Mau, Scott-Elliot.

Fimbristylis diphylla, Vahl. Ruwenzori: Kasagama, Scott-Elliot.

F. exilis, Roem. & Sch. Ruwenzori and Uganda, Scott-Elliot.

F. monostachya, Hassk. (*Abildgaardia monostachya*, Vahl. T.L.S. xxix. t. 109, f. A). Ruwenzori, Scott-Elliot; Unyoro, Speke & Grant.

Bulbostylis trichobasis, var. *uniseriata*, C. B. Cl. West Ankole, Doggett, Scott-Elliot.

B. atrosanguinea, C. B. Cl. Nandi, Scott-Elliot.

Scirpus setaceus, Linn. Ruwenzori: Butagu River, Scott-Elliot.

S. cubensis, Poepp. & Kth. (*Isolepis echinocephala*, Oliv. T.L.S. xxix. t. 107). Unyoro: banks of the Nile, Speke & Grant.

Fuirena stricta, Steud. Kavirondo, Scott-Elliot.

F. leptostachya, Oliv. Madi, Speke & Grant. T.L.S. xxix. t. 108, f. B.

F. umbellata, Rottb. Madi, Speke & Grant.

Lipocarpa argentea, R. Br. Madi, Speke & Grant.

Carpha Emini, C. B. Cl. Ruwenzori, Stuhlmann.

Scleria foliosa, var. *major*, Oliv. Unyoro, Speke & Grant.

S. racemosa, Poir., var. Madi, Speke & Grant. T.L.S. xxix. t. 111, f. 1.

S. glomerulata, Oliv. Madi, Speke & Grant, T.L.S. xxix. t 110, f. B.

Diplacrum pygmæum, Nees. Madi, Speke & Grant.

Carex runssoriensis, K. Schum. Ruwenzori, Doggett.

Gramineæ.

Imperata arundinacea, Cyr. Semliki Valley and Toro, Doggett.

Saccharum spp. Ex Grant.

Pogonatherum sp.? Unyoro, Speke & Grant.

Manisuris granularis, Sw. Unyoro, Speke & Grant.

Vossia procera, Wall. & Griff. Unyoro, Speke & Grant.

Andropogon cymbarius, Linn., var. Gani, Speke & Grant.

A. finitimus, Hochst. From the equator to 2° N., Speke & Grant.

A. hirtus, Linn. By the Nile about 5° N., Speke & Grant.

Anthistiria sp.? 3° 10′ N., Speke & Grant.

Perotis latifolia, Ait. Uganda, Speke & Grant.

Panicum brizanthum, var. *latifolium*, Oliv. Unyoro, Speke & Grant. T.L.S. xxix. t. 112, f. A.

GRAMINEÆ—*(continued).*

Panicum chrysanthum, Steud. Unyoro, Speke & Grant.
P. Crus-Galli, Linn. Unyoro, Speke & Grant.
P. sanguinale, Linn. Uganda, Speke & Grant.
P. verticillatum, Linn. Unyoro, Speke & Grant.
Panicum (*Echinochloa*) sp. Baringo, Johnston.
Pennisetum Benthami, Steud. Madi, Speke & Grant.
Pennisetum sp. Baringo, Johnston.
Olyra latifolia, Linn. Toro, Doggett.
Sporobolus elongatus, R. Br. Uganda, Speke & Grant.
Cynodon Dactylon, Pers. 5° S. to 2° N., Speke & Grant.
Chloris compressa, DC. Uganda, Speke & Grant.
C. gayana, Kunth. Unyoro, Speke & Grant.
Eleusine coracana, Gærtn. "Cultivated everywhere," Speke & Grant.
Phragmites communis, Trin. Unyoro, and from 4° 55′ N. northwards, Speke & Grant.
Eragrostis megastachya, Koel. Unyoro, Speke & Grant.
E. patens, Oliv. Unyoro, Speke & Grant. T.L.S. xxix. t. 113, f. 1.
Eragrostis sp. Nandi Johnston.
Poa sp. Ruwenzori, Doggett.

CRYPTOGAMS.

Filices.

Gleichenia dichotoma, Hook. Uganda, Wilson.
Cyathea Dregei, Kunze. Uganda, Wilson.
Davallia elegans, Sw. Ruwenzori, Doggett; Uganda, Wilson.
Lonchitis pubescens, Willd. Uganda, Wilson.
Cheilanthes farinosa, Kaulf. Ruwenzori, Doggett.
C. multifida, Sw. Naivasha, Johnston.
Pellæa geraniæfolia, Fée. Uganda, Wilson.
P. hastata, Link. Uganda, Wilson.
Pteris flabellata, Thunb. Ruwenzori, Doggett.
P. incisa, Thunb. Uganda, Wilson.
P. quadriaurita, Retz. Uganda, Wilson.
Ceratopteris thalictroides, Brongn. 3° 15′ N., Speke & Grant.
Asplenium amœnum, C. H. Wright. Ruwenzori, Doggett.
A. furcatum, Thunb. Ruwenzori, Doggett; Uganda, Wilson (and 2 vars.); 3° 15′ N. Speke & Grant.
A. longicauda, Hook. Uganda, Wilson.
A. nigripes, Bl. Uganda, Wilson.
A. rutæfolium, Mett. Ruwenzori, Doggett.
Nephrodium Filix-Mas, Rich., var. Uganda, Wilson.
N. unitum, var. *propinquum*, Baker. 2° to 3° N., Speke & Grant.
N. Wilsoni, Baker. Uganda, Wilson.
Nephrolepis cordifolia, Presl. 3° 15′ N., Speke & Grant.
Oleandra articulata, Cav. Uganda, Wilson.
Polypodium lycopodioides, Linn. Uganda, Wilson.
P. Phymatodes, L. Uganda, Wilson.
P. rigescens, Bory. Ruwenzori, Doggett.

FILICES—*(continued)*.

Acrostichum punctulatum, Sw. Uganda, Wilson.
Osmunda regalis, L. Nakuro, Johnston.
Lygodium scandens, Sw. Uganda, Wilson.

Lycopodiaceæ.

Lycopodium dacrydioides, Baker. Ruwenzori, Doggett.

Selaginellaceæ.

Selaginella rupestris, Spring. Madi, Speke & Grant.

Musci.

Breutelia Stuhlmanni, Broth. Ruwenzori, Scott-Elliot, Stuhlmann, Doggett.
Polytrichum sp. Ruwenzori, Doggett.
Rhacocarpus Humboldtii, Lindb. Ruwenzori, Doggett.
Erpodium Hanningtoni, Mitt. "Lake Nyanza," Hannington.

Hepaticæ.

Plagiochila sp. Ruwenzori, Doggett.
Herberta juniperina, Spruce. Ruwenzori, Doggett.

219. PAPYRUS IN BLOSSOM

CHAPTER XII

ZOOLOGY

Mammals

THESE countries round about the lakes whose waters unite to form the greatest river in Africa, must have been in the past, firstly for beasts, and secondly for men, the critical point in Africa, the meeting place of north and south, of east and west, the focus from which modern mammalia and African man radiated all over Southern Africa, after a concentration within the north-eastern portion of the continent. Here for a time, no doubt, paused the European and Asiatic fauna of big beasts which glacial epochs or the attacks of man when he had emerged from the ape drove from India, Western Asia, and Mediterranean Europe into tropical Africa, at that time peopled by the humbler fauna represented at the present day in Madagascar. Creatures like the okapi, whose nearest relations are found fossil in Egypt, Greece, and Western Asia, possibly got no farther than the Semliki forests which lie along the south-western border of the Uganda Protectorate. The other big beasts of the north and east made their way from the countries round about the sources of the Nile into the savannahs and forests of West Africa, and into the park-lands and grassy steppes of the southern half of the continent. When palæontological researches have shown us what the mammalian fauna of Uganda was in the Pliocene and Pleistocene Epochs, we shall probably find that this fauna made a long stay and developed many of its strange existing forms in and near these territories grouped round about the great lakes and that changeable river, the Nile—a river which in all probability once formed a huge lake in the Egyptian Sudan, and at one time may have flowed into the Red Sea, at another may have communicated with Lake Chad.

One reason, no doubt, why the Uganda territories became so much of a focus and centre from which beasts and men expanded their range over Western and Southern Africa, and a centre from which languages and civilisation overflowed and trickled, or rushed, in these directions, was no doubt the existence of that great Congo Forest which even at the present day stretches very nearly without interruption from the coast-lands of the

Cameroons to the Semliki River or Albertine Nile. Man and beasts have partially broken through this forest barrier, though many have been completely kept back by it; but as most movements seek the line of least resistance, so this belt of forest stretching across two-thirds of the southern prolongation of the Dark Continent (coupled possibly with a once existing Eastern African forest, or with regions of absolute sterility near to the Indian Ocean) must have concentrated from time to time within what is now the Uganda Protectorate the movements of living beings whom pressure from the north-east was thrusting farther and farther into Africa. The Uganda Protectorate is remarkable as containing illustrative types representing nearly all the zoographical divisions into which Africa is divided. Here we find forms peculiarly characteristic of the West African region, of South Africa, of East Africa, Somaliland, Central Africa, and the Nile Valley. In the forests of its Western Province there are chimpanzees; the gorilla itself is found within a few days' march of Uganda's western frontier. In the Eastern Province of Uganda there is that clumsy jerboa so peculiarly characteristic of the South African karroo, the Cape jumping hare, as it is incorrectly styled (*Pedetes caffer*). There are the aard wolf and a baboon which, if not the South African chakma, is almost indistinguishable from it. In the north, and perhaps west, of the Uganda Protectorate, the miscalled white or square-lipped rhinoceros, formerly thought to be confined in its distribution to the districts south of the Zambezi, has been shown to exist by Major Gibbons, and both Speke and Stanley claimed to have shot it in Western Uganda. The buffaloes of Uganda are, in the extreme west, the red, short-horned Congo form; in the centre, the Abyssinian type, with horns approximating slightly to the Indian buffalo; and, in the south-west, south, and north-east, the buffalo of South Africa. In its eastern, central, northern, and south-western districts Uganda is extremely rich in those vast herds of game which once characterised South Africa. Nearly every known type of African antelope is represented here. Here, too, are the two principal types of zebra—Grévy's zebra, with its narrow black stripes, large ears, and great size, and Grant's variety of Burchell's zebra, with broad black bands, small white ears, and a bulk not much greater than that of the true zebra of South Africa.* The wild ass of Nubia penetrates into the north-eastern part of the Protectorate. The giraffes are mainly of the three-horned and five-horned northern species, but it is possible that the Somaliland giraffe (*G. reticulata*) penetrates into the Rudolf region. Lastly, in its Western Province, the Uganda Protectorate

* The existing striped horses should, I think, be divided into three groups: (*a*) Grévy's zebra (quite distinct from the others); (*b*) the now extinct quagga; (*c*) all the other zebras—*i.e.*, the four or five varieties of Burchell's, and the true or mountain zebra, which slightly approaches *Grévyi*.

shares with the Congo Free State the honour of being the last refuge of that newly discovered giraffe-like animal, the okapi.

It would become wearisome if I continued generalising in this manner. Enough has been said to show that this portion of Africa is singularly

220. THE ZEBRA OF THE ELGON DISTRICT: GRANT'S ZEBRA (*EQUUS BURCHELLI GRANTI*)

interesting and rich in its mammalian fauna. I will now pass to the special description of a few more remarkable, interesting, or beautiful types.

The existence of the chimpanzee within the limits of the Uganda Protectorate was first reported by Emin Pasha, who is said to have sent home a skull from Unyoro. Subsequent travellers, however, denied that this great ape was found there, and it was not very certain that Emin Pasha had not obtained this skull from the forests to the west of the Albert Nyanza instead of to the east of that lake. Soon after my arrival in Uganda proper I began to make inquiries from the natives about the existence of this ape. I found at once that it was well known to them by tradition, and that they possessed a name for it in their language, which was "edzike," a word that is obviously allied in origin to the "nzige" of Bantu races near the West African coast. According to the traditions of the Baganda, the chimpanzee in the times of their forefathers was found in an extensive forest which still exists in the District of Kiagwe, on the borders of Busoga, and quite in the centre of the Uganda Pro-

tectorate. It is not improbable also, from what the natives told me, that this ape further existed within the last few hundred years on the western side of Mount Elgon. All this evidence of its having inhabited countries nearer and nearer to the eastern side of Africa is interesting, because fossil remains of the chimpanzee have been found in Western India; and it is the opinion of some naturalists that the anthropoid apes, together with their congener, man, were evolved in Asia. Diminishing forest, and, above all, the evolution, multiplication, and rivalry of mankind, extinguished the anthropoid apes in India, and drove the ancestors of the chimpanzee and gorilla westwards into Africa, across countries which in not very remote periods were sufficiently forested to admit of the sojourn of these tree-loving creatures.

At the present day the chimpanzee is limited in its distribution—so far as the Uganda Protectorate is concerned—to the Bugoma and other forests in Unyoro near the east coast of the Albert Nyanza, and to similar stretches of forest in Eastern Toro, Northern Ankole, and perhaps also the western slopes of Ruwenzori and the Semliki Valley. When the author of this book visited the District of Toro and Mount Ruwenzori, he made many inquiries from the natives about the chimpanzee. They knew of this ape's existence in certain forests, but declared they very seldom met it, as it was exceptionally shy. When cut off from retreat, however, it could display great strength and savagery, and the natives spoke of it with a certain amount of awe. They told the same stories about the chimpanzee's habits as have been reported by Emin Pasha and others, such as its building "houses" (shelters) in the trees (though they relate that the adult male chimpanzee often sleeps at the base of a tree with his back against the trunk in the attitude given in the accompanying picture).* Male chimpanzees were said, as in West Africa, to be ready to attack undefended women with the apparent intention of violating them. In acts like these, however, I believe anthropoid apes, like their near allies, the baboons, to be actuated by a sort of humorous spitefulness which delights in frightening and annoying persons of whom they are not afraid. In these attacks the males are often given to great indecency of gesture without any defined intention of attacks on the chastity of the women they are annoying. I should, however, certainly pity any unfortunate woman carried off for connubial purposes by a male ape or baboon, since she would almost certainly be torn in pieces by the jealous females, who, when adult, display the deepest jealousy of human beings of their own sex. The natives of Toro repeat the assertions of Emin Pasha to the effect that the chimpanzees are rather fond of beating with their

* This picture is a photograph taken from an adult male chimpanzee obtained in Toro. Its skin is now in the British Museum.

221. A MALE CHIMPANZEE

hands hollow tree-trunks which they find in the forest, and of shouting in accompaniment to this primitive music. The chimpanzees are certainly very noisy when they believe themselves to be unobserved. I have never succeeded in seeing any of them in these Uganda forests; but I have on one or two occasions heard and recognised their shouting cries, so familiar to me in the West African forests of the Cameroons and the Niger Delta.

Seeing what an interest was taken by us in these chimpanzees, the obliging chiefs in Toro and Unyoro sent us several dead specimens, the skins of which we were enabled to send home to the British Museum, besides two living chimpanzees, one of which I kept for some time in captivity. The first chimpanzee to arrive at Entebbe from Toro gave rise to rather a tragic incident. It was the first that had come to hand. We had been obliged to give up our personal researches in Toro for lack of time, and we left the Western Province of the Protectorate with a strong belief in the existence of the chimpanzee (owing to the cries that were heard and the stories of the natives), but with nothing to add scientific proof to this conviction. But the king of Toro had interested himself much in these researches, and with the aid of the collector of the district, the late Mr. Baile, he organised a great hunt in one of the chimpanzee-haunted forests. His men were provided with extensive nets, and they caught a large chimpanzee in one of these. They transferred the struggling monster to a kind of crate made of strong, lithe branches. This was slung on poles and carried on men's shoulders 180 miles to my residence.

Arrived at Entebbe, the problem presenting itself to us was how to withdraw this powerful and infuriated animal from its cramped confinement, and how to keep it in captivity. It was decided to fasten a strong metal collar round its neck, attaching the collar to a heavy iron chain, the opposite end of which would be most securely tied to the trunk of a growing tree. A hole was made in the withes which encircled the struggling chimpanzee, and each hand or foot as it was thrust through this hole was caught in a noose. At last all the four extremities of the creature were thus secured and tied together. The withes were then cut away, and the ape, hoarse with screaming and beside itself with rage, floundered helpless on the ground. Then the metal collar was (as we thought) securely fastened round the neck and rivetted to the chain, the limbs were untied, and the creature was left to enjoy partial liberty. In about two minutes, with its powerful hands it had wrenched apart the heavy metal collar, which, with the chain, fell to the ground. The spectators scattered right and left, and the ape scrambled up on to the branches of a tall tree. The trees in the garden at Entebbe were linked by scattered forest to the dense woodland of the Botanical Gardens. Had the chimpanzee, without pausing, made straight for the forest of the Botanical

222. HEAD OF CHIMPANZEE FROM TORO

Gardens (which again joined on to a large extent of wild woodland and jungle), he would in all probability have completely regained his liberty; but some half-human instinct prompted him to pause for a while on the branches above us and scream defiant taunts. The idea of losing this (at that time unique) specimen was too much for me. Mr. Doggett had in his hand a loaded rifle. I called to him to fire at the gibbering chimpanzee. He did so, and the poor creature, uttering a dreadful human scream in the middle of its triumph, threw up its hands and fell heavily to the ground, where it gasped out its life with such sighs and groans as to make me feel a murderer.

The other living specimen sent to us was not quite so old or so strong, and soon became tame. It died, alas! as it was on its way home to the Zoological Gardens, having caught a severe attack of pneumonia in passing from the tropical climate of Uganda to the European bleakness of the Nandi Plateau. This chimpanzee, when angry, did not attempt to bite purely and simply; its great idea was to strike with the open hand, though there were occasionally gestures like those of the baboon, which might lead one to believe that the chimpanzee at times drags its opponent to his mouth with its hands and pushes him away as it bites, thus tearing out the flesh with great force. These angry gestures were not so often made towards human beings (with whom it reconciled itself rapidly), but were used to punish two impudent baboons in my collection, who, whenever they

managed to escape from confinement, would make for the chimpanzee's quarters and attempt to rob him of his food.

During my stay in the Uganda Protectorate the place of theatres, concerts, exhibitions, and all the pleasant dissipations of our civilised existence was taken by zoological studies, which, together with painting, were my only distractions. I was greatly interested in keeping a large menagerie. Many of the creatures, especially the larger in size, remain still at my headquarters at Entebbe; others, the monkeys especially, travelled about with me, and enlivened the caravan with their pranks. It amused us, amongst other things, to name the baboons and monkeys with distinctive appellations, which they soon came to realise as quickly as a dog does. The male monkeys were usually given Muhammadan names, partly by the Muhammadan coast porters, and partly in humorous raillery by the Europeans. On the other hand, the female simians were called by English names of a more or less incongruous kind, largely taken from the heroines of the works of fiction circulating in the camp. Amongst our baboons was Eleanor Maltravers, from the Semliki Valley, on the Congo Free State boundary. She belonged to a species of baboon difficult to classify,* but offering considerable resemblance to the chakma-like form which I have observed in the eastern part of the Protectorate. A male of this chakma-like type had been captured by us near Naivasha when a tiny little fellow and seemed to be indistinguishable from Eleanor in appearance, though nearly 400 miles separated their birthplaces. The male was called Nassur, and Nassur and Eleanor, for aught I know, are living still as amusing bandits at Entebbe.

Baboons possess a quite half-human intelligence, and though sometimes inconvenient in their audacious mischief, they are most interesting pets to keep and study; and it is only by thus having them to live with one for years that one realises how much their average untrained intelligence is above that of the ordinary beast, and how distinct an approach the baboon makes towards man. Personally, I believe that the baboon comes very near being an actual stage in man's ascent, the modern African baboon having no doubt diverged a little from the ancestral types whence man ascended; but, with the sole exception of their exaggeration of muzzle, they undoubtedly approximate in form to that type—the grandparents, so to speak, of man, the stage immediately preceding the anthropoid ape and succeeding the mere long-tailed monkey. The ancient Egyptians, if their sculptures and paintings are to be taken as accurate, not only tamed the baboon of Nubia, but trained it to be a useful animal in gathering fruits and performing other services. It is a pity that this art should have been lost. I know from personal experience that it is extremely easy to tame baboons, but very difficult to train them to real obedience, and anything like work is

* *Papio doguera (?).*

abhorrent to their nature. If only we could learn the secret of the ancient Egyptians in this respect, we might solve the domestic servant problem eventually, when all mankind becomes too proud to perform menial tasks.

223. ELEANOR AND HER NURSE (A FEMALE *DOGUERA* BABOON FROM THE SEMLIKI FOREST)

We might, in preference to automata, recruit our servants, our hewers of wood and drawers of water, from amongst man's nearest relatives, the neglected simians, the Bandar Lōg of Rudyard Kipling's "Jungle Stories."

The monkeys of Uganda number amongst them some remarkable types. There is the beautiful colobus, whose name in Greek means "mutilated," because the colobus monkey has by degeneration practically lost its thumb, its hands being four-fingered only, and the place of the thumb marked, if at all, by a minute wart bearing a tiny nail. The colobus monkeys are a genus peculiar to Africa. With perhaps three exceptions they are remarkable for their black and white coloration. The black is very black, and the white

224. TWO BABY BABOONS (*PAPIO DOGUERA ?*) FROM THE RIFT VALLEY

is snowy white. The colobus has a long tail with an immense white plume at the end. In certain forms found on Mount Kilimanjaro, this white plume at the end so extends up the tail that the whole of this organ is a creamy white plume about eighteen inches in length. Both sexes have stiff whiskers and beard of white, while the sides of the body have long manes of white hair. In one rare species of colobus the white disappears almost altogether, only being represented by a little fringe of grey. In an entirely new species discovered by us on the north-west slopes of

Ruwenzori,* the white hair is reduced to a minimum, the female being mainly black all over. Lastly, there are two species of colobus which are not black and white. One was found in the island of Zanzibar, and is now nearly extinct. It was chiefly chestnut brown, with a little black and white. We discovered, however, another colobus in the forests of Western Toro, to the east of Ruwenzori, which has no black or white on it, but is a combination of bright chestnut red and pinkish grey. This I took to be an animal new to science, but it appears that an identical red colobus monkey was discovered by Dr. Peters on the Tana River. If the red colobus of Western Toro (which is the only spot where it is found in the Uganda Protectorate) and that of the Tana River are the same species, it is a rather remarkable instance of interrupted distribution. The red colobus of Toro answers to its Greek name in the adults, which have only four fingers on the hands, and the minutest trace of a thumbnail in the place where the thumb is missing. But the young colobuses of this species have a complete thumb, only a little smaller than this finger would be in the *Cercopitheci.* As the animal grows to maturity, so its thumb dwindles, until in a very old male there may be absolutely no trace left of the missing finger.

All the colobuses live in dense forest. The common black and white species may be found at altitudes of 9,000 feet on Ruwenzori,† and also on Elgon and the Nandi Plateau; but the same animal is equally abundant in the tropical forests of Toro and Uganda. Consequently the same species inhabits districts where the temperature often descends to freezing point, and others where the heat is that of a luxuriant tropical forest. The colobus monkeys live almost entirely on leaves, and, unlike most other monkeys, seem to dislike animal food. Several native tribes in the Protectorate eat this monkey, and some, like the Andorobo, make it their favourite article of diet, declaring its flesh to be sweet and succulent. These monkeys do not, as a rule, live long or healthily when in captivity, for a rather curious reason. The creature is so absolutely used to an arboreal life that when taken away from the trees and obliged to live on the ground it is perpetually sitting down on its haunches. When in the trees it is accustomed to defecate as it sits over a branch or as it jumps from tree to tree. Consequently, when on the ground, it is unable to void the excreta in a cleanly manner, and soon a pad of mud and excrement forms over the *nates.* This breeds grubs and parasites, and very often the monkey dies from a painful disease caused in this way, unless, of course, it happens to be the property of a European who takes care to have it kept in a cleanly state.

A strange-looking monkey comes from the District of Unyoro, and is

* Named *Colobus ruwenzorii* by Mr. Oldfield Thomas.

† As already related, a species of black colobus new to science was discovered by us to exist in the dense forest on the north-west flank of Ruwenzori.

Colobus occidentalis.

The common Colobus Monkey of Central Africa.

found elsewhere in the Egyptian Sudan and in Senegambia. This is the patas monkey, a creature which has taken to living almost entirely on the ground, and has developed very long legs like a greyhound. Its head is a bright chestnut on the top, and the rest of the body is a mixture of foxy-

225. THE RED COLOBUS FROM TORO (*COLOBUS RUFOMITRATUS*)

yellow, buff, and white. In the Uganda forests there are large *Cercopithecus* monkeys of blackish green, and, above all, there is a charmingly pretty creature, the white-nosed monkey, a coloured illustration of which appears in this book. The fur of this monkey is very brightly coloured with chestnut-red, greenish yellow, and purple-black. Its white whiskers and white tip to

its nose, together with the exceedingly long red tail, make it a conspicuous object. The natives very frequently catch these monkeys (especially when young), and they then become the most charming pets, being much more cleanly in their habits than their congeners. Their ways are peculiarly winning, and suggestive of some graceful spritelike Ariel.

Mr. Alexander Whyte, soon after his arrival in Uganda, made an interesting discovery. He obtained a specimen of the West African potto, or tailless lemur (*Periodicticus potto*). This had been thought formerly to be confined to equatorial West Africa in the vicinity of Old Calabar. It is evident that its range extends right across the continent to Uganda, like that of the chimpanzee and other West African mammals and birds. There are two or three species of galago lemurs in the country, whose weird cries are often believed by the natives to be the voices of devils. The young of the galago (and no doubt of other lemurs) do not arrive very rapidly at maturity, taking two or more years to grow to full size. Very often the young are believed by Europeans to belong to a different species from the adult on account of this difference in size.

The bats of Uganda offer, so far as I know, no species peculiarly confined to that Protectorate. The insectivorous bats belong mostly to kinds widely spread throughout tropical Africa, though there are one or two species of fruit-eating bats which are elsewhere only found in the West African sub-region. Among insectivorous mammals may be noted the large shrews of the genera *Rhyncocyon* and *Macroscelides*, the former being the well-known elephant shrew, with a proboscis nearly an inch long. Both these shrews stand and leap on their hind-legs only, like kangaroos or jerboas. Also a golden mole (insectivorous) and a prettily coloured hedgehog.

The cat-like carnivores are represented by the lion, the leopard, two species of serval, *Felis caffra*, the caracal lynx (in the north-east), and the cheetah. *Felis caffra* is very like the wild-cat of Egypt and Syria, which was the principal element in the origin of the domestic cat of Europe and Asia, though I, for one, hold that our domestic cat has a large infusion of the blood of *Felis catus* to account for the tabby markings and certain peculiarities of form not found in *Felis maniculata* or in the domestic cat of Egypt and North Africa (which is probably descended without intermixture from the wild-cat of Egypt). *Felis caffra*, the African wild-cat, spread throughout Africa from south of the Sahara to Cape Colony, bears a strong resemblance in appearance to the domestic cat. It was never caught and tamed by the natives of Africa until the domestic cat had been introduced from Egypt and India, or by the Portuguese on the west coast of Africa. After its introduction was made, it has often occurred to natives of Uganda to catch the young kittens of the wild *Felis caffra* and bring them up as domestic cats. In addition

THE WHITE-NOSED CERCOPITHECUS MONKEY OF UGANDA.

to this, the same wild-cat interbreeds freely with the domestic animal, even though the latter may be of European origin, and the kittens of the mixed breed become handsome creatures.

The lion is found fairly abundantly throughout the Uganda Protectorate, excepting only in the dense forests or in the more settled districts. There is nothing specially remarkable about the lion in these parts, except perhaps that young animals of both sexes often, when fully grown, though not quite mature, retain rather clearly, marked in reddish brown, the spots of their cub-hood. On one skin of a young male lion killed by our expedition the spots are so clearly marked that their shape may be pretty well defined, and they appear to be strikingly like in arrangement the rosettes, single spots, and spots-running-into-stripes of a leopard skin. In all probability both the lion and the tiger developed on independent lines from a leopard-like form, the lion keeping the leopard's markings unaltered until they faded away into the general dun colour of the body, while in the tiger the rosettes gradually lengthened into stripes. On some tiger skins the stripes are double throughout their length, and are simply drawn-out rosettes. In the case of the lion, in all probability the ground colour of the skin darkened from the original yellow to its present tawny tint, while the spots faded from black to reddish brown. Curiously enough, an analogous process is going on with the woolly cheetah found in South Africa. In this case also the spots are fading from black into reddish brown, while the rest of the fur is changing from pale yellow to dark fawn colour. I do not know that I can say that the lions of Uganda are more spotted than any other race, for since making these observations I have examined other lions now alive in the Zoological Gardens from other parts of Africa, and these in two instances present types retaining the spots in quite as marked a manner as is the case with the specimens I have examined in Uganda. I doubt whether it has been any particular advantage to the lion to lose his spots; one might imagine that on retaining his lionhood he has cared more for the mane, and strength of jowl and limb, and less for the decoration of his skin. What strikes one irresistibly in these countries is that leopards, when seen in the open at a little distance, appear to be without spots, and of as uniform a tawny tint as a lion.

On nearly all the occasions when I have seen leopards wild in Uganda, I have either mistaken them for young lionesses or even for the hornless females of antelopes!—and this though my sight is good. Female reed-buck have a certain way of crouching before plunging away in a loose-limbed gallop which may very well cause one to mistake a leopard half hidden in the grass for an innocuous doe. It is generally not until one sees the long leopard tail waving in the air as the creature bounds away in a

shambling gallop that one realises the nature of the animal. The leopard is as abundant and omnipresent in the Uganda Protectorate as everywhere else in Africa south of the Sahara and away from the settled districts of Cape Colony. In forest regions the leopard is as much dreaded by the natives as is the lion on the plains. Many are the stories told to one by the people of the Semliki forests or the more forested regions of Uganda, such as Kiagwe, of the way in which leopards attack women, children, and even men on the outskirts of villages.

The serval cat is extremely abundant in this Protectorate up to the verge of the Congo Forest, though not within that forest. The skin of this animal is much prized by the negroes in the Protectorate as a handsome addition to their clothing, or as their only garment. In some districts only young men of royal blood are allowed to wear the serval skin. The serval bears a strong resemblance in the open to a diminutive cheetah. This resemblance is due to the length and slenderness of the limbs; but the tail is much shorter than in the great hunting cat. The resemblance, of course, is only superficial, because the serval is a true cat, and is closely allied to the lynxes, whereas the cheetah, as my readers know, is in a different genus from the typical felines.* The serval hunts its game to a great extent, and is capable of running down much of its prey, such as young antelopes. One not infrequently sees a male and female serval hunting together. The kittens of this handsome animal are occasionally caught by the natives and semi-domesticated.

In the Kingdom of Uganda and in the Western Province of the Protectorate is found the servaline cat, which is considered to be a near ally of the serval. It is distinguished from the last-named by its markings. These in the serval are large simple black spots, running into stripes here and there on a pale yellowish or yellowish grey ground. In the servaline cat, however, though a few bold stripes are retained about the throat and neck, and perhaps on the limbs, the whole of the rest of the body is covered with tiny black spots, while the ground colour of the fur has darkened from pale yellow to a greyish brown. It is not very uncommon to see skins which are intermediate in markings between the extremely small and numerous spots of the servaline and the bold black patches and stripes of the common serval. Evidently the servaline cat is a species in process of formation, and its markings are subject to great variability. The natives state that some serval skins are a uniform dark blackish brown (*Melanosis*, of course). I have not seen any of these black servals. What is not generally known in England, however, is the large size to which these servaline cats may grow. Their tails are not very long—they are thick and bushy; but the size of the skin sometimes

* *Cynælurus.*

THE SERVAL CAT.

has appeared to be nearly that of a leopard. Seeing these very large skins peppered all over with innumerable tiny black spots, yet retaining bold black markings on the throat and belly, I was irresistibly reminded of an abnormal leopard skin which was exhibited some years ago by Dr. Günther at the Zoological Society. This skin was marked precisely like that of a servaline cat (it came from the northern part of Cape Colony), but I think I am right in saying that its tail was long, and obviously that of a leopard. But for the tail, I should say that this abnormal skin was nothing but an unusually large specimen of the servaline cat.

The cheetah, or hunting leopard, is fairly common in the North-Eastern, Central, and Nile Provinces of the Protectorate. It is even, I believe, found in Unyoro and the northern part of the Kingdom of Uganda.

As regards hyænas, the spotted hyæna is found nearly everywhere in the Protectorate, but in the interior of Ankole there would almost seem to be a distinct variety of these species, in which the hair is a good deal longer than in the ordinary form (this is also the case with the spotted hyænas of the Nandi Plateau), and the spots are much blacker, and sometimes extend in length until they resemble horizontal stripes. A skin exhibiting these peculiarities was sent by me to the Zoological Society. In the north-eastern part of the Protectorate it is stated that the striped hyæna makes its appearance. This statement has not yet been confirmed by the obtaining of specimens, and it is possible that people have confused the striped hyæna and the aard wolf (*Proteles*). The aard wolf is undoubtedly found in the eastern part of the Uganda Protectorate, especially in the Rift Valley. It lives in burrows, and is very seldom seen out in the daytime.

Besides the civet cat, which is fairly common, there are the usual African genets, and in addition a large new genet, the size of a civet, which is found in the Western Province and in the Semliki Forest. This new genet has been named by Mr. Oldfield Thomas *Genetta victoriæ*. I give a coloured illustration of it in this volume.

The jackal of Central Africa between the Zambezi and the latitudes of Abyssinia always seems to me a somewhat indeterminate species, something like the servaline cat. Some specimens are very like the jackal of Northern Africa. Others, again, might almost be mistaken for the splendid black-backed jackal of South and North-East Africa. I suppose the common form of jackal, abundantly found throughout the Uganda Protectorate, and which is illustrated by my painting, would be called the side-striped jackal (*Canis lateralis*), common throughout West Africa and Nyasaland. The beautiful black-backed jackal, with bands of silver fur and bright yellow tail and legs, seems to be confined to the north-

eastern part of the Uganda Protectorate. I have seen them myself in the vicinity of Lake Baringo.

The hunting dog (*Lycaon pictus*) is abundantly found throughout the Protectorate, especially in the north-east and centre and in the Nile Province. Mr. Doggett and the present writer are both disposed to think that that curious Abyssinian dog, *Canis simensis*, extends its range to the north-eastern part of the Uganda Protectorate, and is found on the north-eastern flanks of Mount Elgon and in the vicinity of Lake Baringo. But this is only conjecture based on the peculiar bark of this animal, and the sight of what was supposed to be its form in the moonlight. I remember when sojourning on Kilimanjaro many years ago I was strongly of opinion that *Canis simensis* was found on the flanks of that mountain.

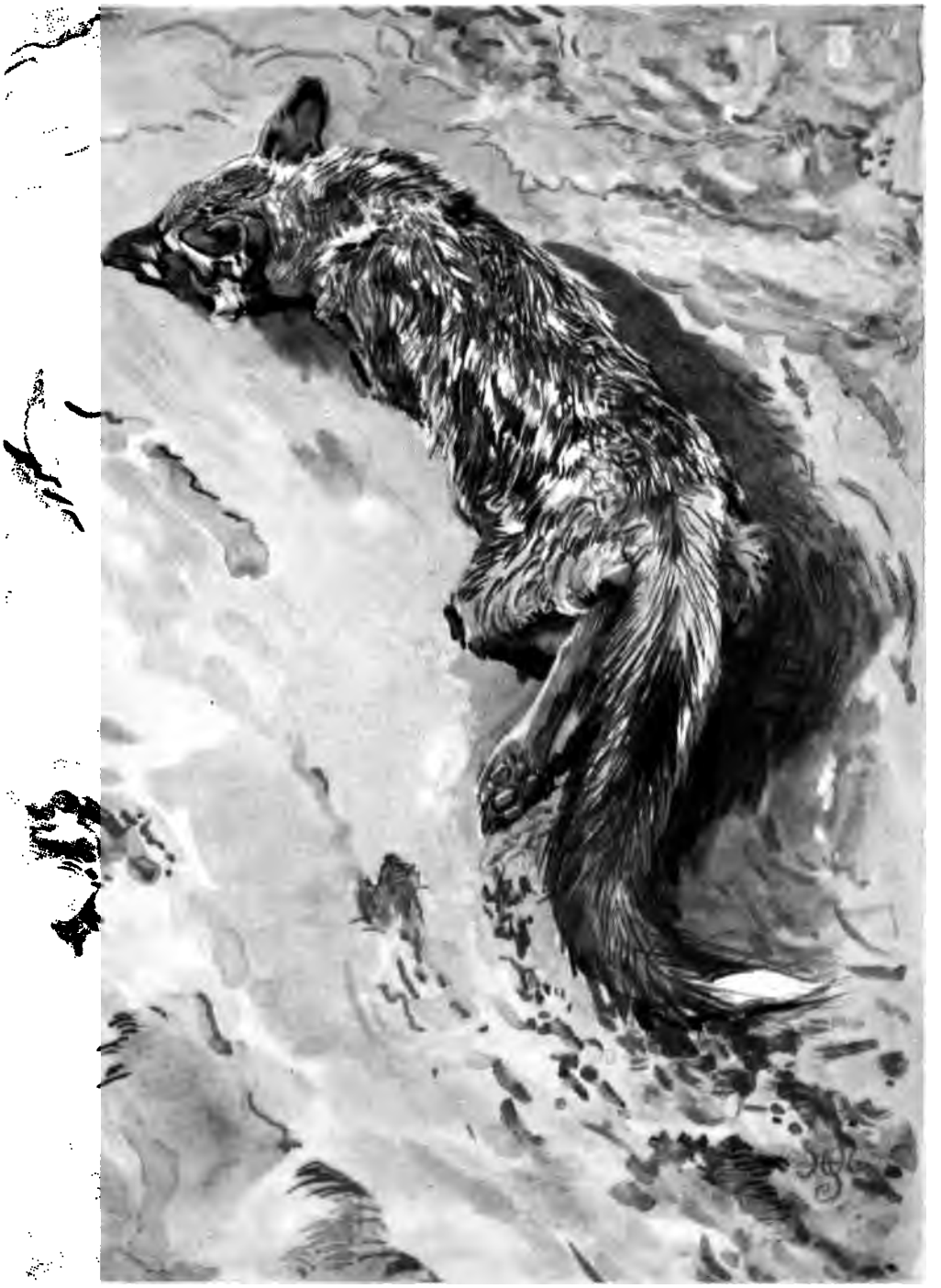
The otter, probably *Lutra maculicollis*, is found in almost all the lakes and most of the rivers of Uganda. It is a very prominent beast in the stories of the Baganda, who greatly value its fur. The skin of this otter is also made into strips for the sandals of kings, princes, and the aristocracy generally in the Kingdom of Uganda and adjoining Bantu countries.

The white-necked weasel (*Pœcilogale albinucha*) is found, but not commonly; the same thing may be said of the ratel, or honey-badger.

Amongst the rodents may be mentioned as specially common or remarkable the handsome squirrels of the genera *Sciurus* and *Xerus*, the porcupine (*Hystrix galeata*), the ground rat * (*Thryonomys swinderenianus*), the Cape jumping hare (*Pedetes caffer*), and one or more species of hare.

There are two, or possibly three, species of hyrax in the Uganda Protectorate. *Procavia Crawshayi* and *Procavia Jacksoni* are found on Ruwenzori up to the snow-line, on Elgon, and on the Nandi Plateau. In the lower lying country below 4,500 feet, there is a hyrax (*Procavia marmota*) remarkable in appearance, with long, silky, dark chocolate-coloured hair and a very large white patch on the back. The hair of this animal falls over its face much as it does in those fancy breeds of guinea-pigs or in a Skye terrier. I kept one of these animals some months in captivity, and its favourite food was the flowers of the banana. On the mountain ranges of the Uganda Protectorate the hyrax is a most important animal in the eyes of the natives, as they depend on it almost entirely for clothing and a great deal for food. They are extremely fond of its flesh, and this is the one and only bait which draws them up to the snow-line of Ruwenzori. The beautiful woolly fur of the mountain hyraxes is the principal skin worn by the natives of these upland districts as a protection from the cold. Many hyrax skins are sewn

* A creature in appearance like a huge guinea-pig with a short tail.



A Jackal of Uganda.

together neatly until a large fur cloak is formed, and this is thrown over the shoulders.

The elephant is found all over Uganda, except perhaps close to thickly

226. THE CAPE JUMPING HARE (A CLUMSY JERBOA): *PEDETES CAFFER*

populated districts. I have seen large herds of this wonderful beast, whose appearance and mode of life so vividly recall those past ages of the earth's history when man had not yet made himself master of creation. The elephant might have attained to this position had not this clever ape

forestalled him. But few elephants were killed by my expedition. We were rather anxious, on the other hand, to make experiments in the direction of preserving and domesticating this remarkable beast. To attain this end I called firstly the chiefs of the Kingdom of Uganda into council and asked them whether their people could attempt to ensnare or catch in some way very young elephants sufficiently small to be easily controlled. Little or nothing of the kind had ever been attempted before in this part of Africa, just as they had never made any previous effort to catch chimpanzees; but so delightfully quick of response are these intelligent negroes,

227. YOUNG ELEPHANT AND ZEBRA AT ENTEBBE

and so anxious to meet one half-way in developing their country, that within a week of having first mentioned the matter to the Baganda chiefs the first young elephant in our series of experiments was landed alive and well at Entebbe. This little creature was at the time only four feet high. In two days it had become perfectly tame, and would follow a human being as readily as his own mother. It was easy enough to feed him with milk, because all that was required was a bottle with a long neck. This bottle was filled with cows' milk diluted with water, and poured down the elephant's throat. Soon all that one had to do was to place the neck of the bottle in the elephant's mouth, and the intelligent

228. A YOUNG ZEBRA

creature wound its trunk round the neck of the bottle, tilted it up, and absorbed the contents. For several weeks the elephant throve, and became a most delightful pet. It would allow any one to ride on its back, and seemed to take pleasure and amusement in this exercise. It would find its way through diverse passages into my sitting-room, not upsetting or injuring anything, but deftly smelling and examining objects of curiosity with its trunk.

At the same time we had in captivity a young zebra, which was also to be the pioneer of a domesticated striped horse. These two orphans, the elephant and the zebra, became greatly attached to each other, though perhaps there was more enthusiastic affection on the part of the elephant, the zebra at times getting a little bored with constant embraces. Alas and alack! both elephant and zebra died eventually from the unwholesomeness, to them, of cows' milk. Several other elephants of the same age—that is to say, about four to six months old—were delivered into my hands, but all eventually died. Cows' milk appears to give these creatures eventually an incurable diarrhœa, while all attempts at that early age to substitute for milk farinaceous substances have also resulted in a similar disease. I do not say that it is impossible to rear young elephants by hand, for we have not made a sufficient number of experiments, but it is very difficult. I therefore favour the plan of attempting to catch elephants of perhaps a year old, at which age they do not require milk as an exclusive diet. One specimen of this age was caught, and was readily tamed, and for aught I know is still alive in captivity. As to young zebras, they must be reared with asses as their foster-mothers.

I am afraid that blustering creature, the rhinoceros, can be turned to no useful purpose in the future of Africa, but he is such a grotesque survival from the great mammalian epoch that he should be steadily preserved from extinction. The rhinoceros, however, is a handful, to use a colloquialism. All along the route of the Uganda Railway game is being carefully protected, with the agreeable result that antelopes, zebras, and ostriches graze close to the line, as fearless of man as if they were in an

with the square-cut, non-prehensile upper lip. The existence of the square-lipped rhinoceros in the Nile Province of the Uganda Protectorate is now proved. The animal is probably found eastwards as far as the vicinity of Lake Rudolf, and also in the Western Province of Uganda, in Buddu, and Karagwe. Speke and Stanley both shot "white" rhinoceroses in Karagwe and Ankole in the 'sixties and 'seventies.

As already mentioned, the horse tribe in Uganda is represented by the

230. YOUNG GRANT'S ZEBRA, UGANDA

Nubian wild ass in the north and north-east, Grevy's zebra in the north-east and east, and Grant's zebra everywhere except in forest.

The common hippopotamus is still found in every river with water enough to cover his recumbent body, and in nearly every lake or marsh in the Uganda Protectorate. The animal is very dangerous to navigation at the north end of Lake Albert and on the Upper Nile. He is consequently not much protected by the Game Regulations (purposely), as there is no immediate danger of his becoming extinct; for in the vast marshes of Kioga and Kwanya he will long be preserved from the white man's rifle, and will be out of the way of steamer routes. I have noticed among the hippopotamuses of the Victoria Nyanza a marked development

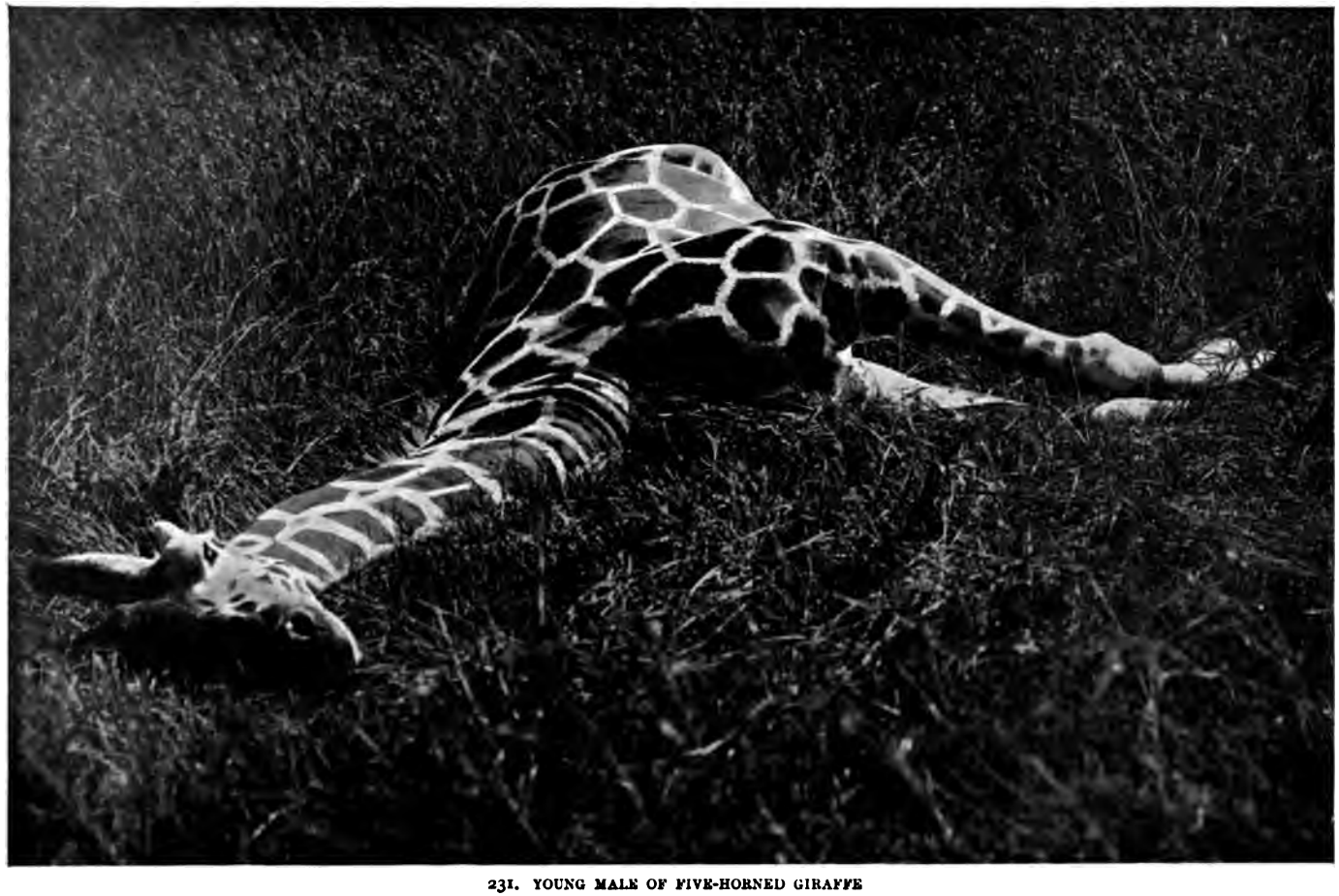
of white bifurcated bristles on the muzzle. It is the last vestige of the hair which once covered this animal's body before it took so markedly to an aquatic existence. It is just possible that the natives' stories of a huge pig in the Semliki forests may point to the extension of the range of the Liberian or pygmy hippopotamus (a forest-loving animal) right across through the forest zone from the west coast of Africa to the Semliki River. The Belgians state that there is a very small hippopotamus in the south-western part of the Congo Free State.

As regards the pig family, that group of artiodactyles is represented in the Uganda Protectorate by the Ethiopian wart-hog in the west and centre and south-east, and by the Elian's wart-hog in the north-east; also by the bush-pigs, or river-hogs. Of these there are the common East African species, which is widely distributed throughout the Protectorate, and the red river-hog of West Africa, which is found in the Semliki Forest.

It may be of interest to mention that the camel as a domestic animal has penetrated into the Rudolf and Nile Provinces of the Uganda Protectorate, though this creature in pre-historic times was once found in Algeria and Arabia. There is nothing to show that it was ever indigenous to tropical Africa.

The giraffe is found at the present day in the Eastern Province of the Uganda Protectorate, in the northern part of the Central Province, and in the districts east of the Nile. So far as I know, in the north and south-east of the Protectorate the species or variety of giraffe is that known as the northern or three-horned, the ordinary form of giraffe which is found right across the Sudan from Abyssinia to Senegambia. (In the Niger and Benue districts it is replaced by a distinct and very tall species, *Giraffa peralta*.) But in the north-eastern part of the Protectorate, about Lake Baringo and Mount Elgon, the male giraffes possess five horn-bumps or ancient horn-cores. I first heard of this peculiarity from a Goanese ivory-trader; but as he had no specimen to show me, I did not attach much importance to his remarks. In the month of May, 1901, we were returning from a journey round Mount Elgon, and for the first time in the Uganda Protectorate I found myself among large herds of giraffe. I was anxious to secure good specimens for the British Museum. Mr. Doggett and myself therefore shot two males and two females. I was surprised to notice that each of the males had five horn-bumps,* the females being restricted to three. The four heads thus procured are now in the British Museum at South Kensington. I give here a photograph of a male five-horned giraffe as it lay on the ground just after

* The two extra "horns" are two parallel bumps or knobs rising from the ridge at the base of the skull, close to the first vertebrum. They are occipital as compared with already existing parietal and frontal protuberances.



231. YOUNG MALE OF FIVE-HORNED GIRAFFE

being shot. Unfortunately, though this photograph gives distinctly the markings of the animal, it does not enable the reader of these notes to distinguish the five horn-bumps; but a careful drawing in colour of the head of this giraffe from a side view is given in Chapter I. facing p. 25. This variety of giraffe would appear to differ from its northern congeners slightly in its coloration. The old males or females have the spots or patches almost purple-black, while the hair in between the spots is a dirty brown. This is the coloration of the upper part of the body, but the legs and belly in the old specimens tend to be nearly pure white. Seen from a distance, therefore, these five-horned giraffes when old looked black and white, or mainly black, since the white part of their bodies is often hidden by brushwood. The young, especially amongst the females, are coloured much like the ordinary northern giraffe, with orange-coloured patches on a cream-coloured ground. But before reaching the old stage of nearly black and white, the adult males and females offer a very beautiful coloration. The great polygonal patches are orange-brown, with a purple rosette or centre, but some of the spots about the face are purple-black on a white ground. I also think that these five-horned giraffes are slightly taller than the other forms of this animal. One male that we shot certainly carried his head at a height twenty feet above the ground. These animals go about in large herds, and the old ones, males or females, seem to stand sentry whilst the rest of the herd browses unconcernedly on the branches and leaves of trees. These sentries often choose a small hillock or large ant-hill, and look veritable lighthouses in the distance as they stand out against the sky. Seen any way but broadside, they do not appear to be beasts, but resemble a huge, tapering black tree-trunk reared into the sky, the neck being carried like a perpendicular tower. I have never seen a more impressive sight in Africa than a large herd of these animals moving about unconcernedly, taking little or no notice of our presence amongst them; for in this country round Mount Elgon they had evidently been unattacked by man for a long period. When the four specimens above referred to had been obtained, all further shooting was rigorously stopped, and therefore we passed through subsequent herds containing hundreds of these animals without any feeling of blood-guiltiness. The Somali giraffe,* a very well-marked species, on whose hide the place of spots is taken by a reticulation of whitish lines on an almost red ground colour, probably penetrates to the vicinity of Lake Baringo and the south end of Lake Rudolf.

The author of this book remembers having encountered in his childhood—say in the later 'sixties—a book about strange beasts in Central Africa, which was based on information derived from early Dutch and

* *Giraffa reticulata.*

Portuguese works. The publication of this book was more or less incited at the time by Du Chaillu's discovery of the gorilla and other strange creatures on the west coast of Africa, and its purport was to show that there were in all probability other wonderful things yet to be discovered in the Central African forests. Amongst these suggested wonders was a recurrence of the myth of the unicorn. Passages from the works of the aforesaid Dutch and Portuguese writers were quoted to show that a strange, horse-like animal, of striking markings in black and white, existed in the depths of these equatorial forests. The accounts agreed in

232. OLD MALE OF FIVE-HORNED GIRAFFE

saying that the body of the animal was horse-like, but details as to its horn or horns were very vague. The compiler of the book (the late Philip Gosse, I think) believed that these stories pointed to the existence of a horned horse in Central Africa.

Somehow these stories—which may have had a slight substratum of truth—lingered in the writer's memory, and were revived at the time Stanley published his account of the Emin Pasha expedition, "In Darkest Africa." A note in an appendix of this book states that the Congo Dwarfs knew an animal of horse-like appearance which existed in their forests, and which they caught in pitfalls. The occurrence of anything like a horse

or ass—animals so partial to treeless, grassy plains—in the depths of the mightiest forest of the world seemed to me so strange that I determined to make further inquiries on the subject whenever fate should lead me in the direction of the great Congo Forest. Fate was very kind to me in the matter. In the first place, soon after arriving in Uganda my intervention was necessary to prevent the too-enterprising German carrying off by force a troop of Congo Dwarfs to perform at the Paris Exhibition. These little men had been kidnapped on Congo Free State territory. The Belgian

233. FEMALE OF UGANDA FIVE-HORNED GIRAFFE (THE FEMALE HAS ONLY THREE HORNS)

authorities very properly objected, and as the German impresario had fled with his Dwarfs to British territory, they asked me to rescue the little men from his clutches and send them back to their homes. This was done, and in so doing, and in leading them back to the forests where they dwelt, I obtained much information from them on the subject of the horse-like animal which they called the "okapi." * They described this creature as being like a zebra, but having the upper part of its body a dark brown. The feet, however, they said, had more than one hoof.

* As a matter of fact, the Dwarfs pronounced the word "o'api," but the big black tribes of the forest called the creature "okapi."

When we reached Belgian territory, on the west side of the Semliki River, our inquiries were renewed. The Belgian officers at once said they knew the okapi perfectly well, having frequently seen its dead body brought in by natives for eating. They stated that the natives were very fond of wearing the more gaudy portions of its skin; and calling forward several of their native militia, they made the men show all the bandoliers, waist-belts, and other parts of their equipment made out of the striped skin of the okapi. They described the animal as a creature of the horse tribe, but with large, ass-like ears, a slender muzzle, and more than one hoof. For a time I thought we were on the track of the three-toed horse, the hipparion. Provided with guides, we entered the awesome depths of the Congo Forest. For several days we searched for the okapi, but in vain. We were shown its supposed tracks by the natives, but as these were footprints of a cloven-hoofed animal, while we expected to see the spoor of a horse, we believed the natives to be deceiving us, and to be merely leading us after some forest eland. The atmosphere of the forest was almost unbreathable with its Turkish-bath heat, its reeking moisture, and its powerful smell of decaying, rotting vegetation. We seemed, in fact, to be transported back to Miocene times, to an age and a climate scarcely suitable for the modern type of real humanity. Severe attacks of fever prostrated not only the Europeans, but all the black men of the party, and we were obliged to give up the search and return to the grass-lands with such fragments of the skin as I had been able to purchase from the natives. Seeing my disappointment, the Belgian officers very kindly promised to use their best efforts to procure a perfect skin of the okapi.

Some months afterwards, the promise was kept by Mr. Karl Eriksson, a Swedish officer in the service of the Congo Free State, who obtained from a native soldier the body of a recently killed okapi. He had the skin removed with much care, and sent it to me accompanied by the skull of the dead animal, and a smaller skull which he had obtained separately. The skin and skulls were forwarded to London, where they arrived after considerable delay. The British Museum entrusted the setting up of the okapi to Mr. Rowland Ward, of Piccadilly, and from the mounted skin and other data I have made the drawings which illustrate this book, though the coloured drawing was, in the main, done in Africa from the skin, whilst this was fresh and still retained some indication of the animal's form. The colours of the hair were brighter before the skin made its journey to London. This coloured drawing originally differed in some particulars from the appearance of the okapi as set up by Mr. Rowland Ward. Until the okapi has been photographed alive or dead, and its exact shape in the flesh is thus known, it is difficult to say which of the two versions of my water-colour drawing is the more correct—that published

in the "Proceedings of the Zoological Society" (which was done in Africa) and the revised version of the same painting which illustrates this book. In the first version I have given the animal a very stout, horse-like build:

234. HEAD OF THE OKAPI

in the second, based on Mr. Rowland Ward's restoration, I have given a more giraffe-like form to the mysterious okapi.

The size of the okapi is that of a large stag. It stands relatively

higher in the legs than any member of the ox tribe; otherwise I should compare its size to that of an ox. Like the giraffe, this creature has only two hoofs, and no remains whatever of the other digits, which are represented outwardly in the deer, oxen, and in most antelopes by the two little "false hoofs" on either side of the third and fourth toes.

The coloration of the okapi is quite extraordinary. The cheeks and jaws are yellowish white, contrasting abruptly with the dark-coloured neck. The forehead is a deep red chestnut; the large broad ears are of the same tint, fringed, however, with jet black. The forehead ranges between vinous red and black in tint, and a black line follows the bridge of the nose down to the nostrils. The muzzle is sepia-coloured, but there is a faint rim or moustache of reddish yellow hair round the upper lip. The neck, shoulders, barrel, and back range in tone from sepia and jet black to rich vinous red. The belly is blackish, except just under the knees. The tail is bright chestnut red, with a small black tuft. The hindquarters, hind and fore legs are either snowy white or pale cream-colour, touched here and there with orange. They are boldly marked, however, with purple-black stripes and splodges, which give that zebra-like appearance to the limbs of the okapi that caused the first imperfect account of it to indicate the discovery of a new striped horse. The soft parts of the animal being as yet unknown, it cannot be stated positively that the okapi possesses a prehensile tongue like the giraffe, but the long and flexible lips would seem to atone for the very weak front teeth. It is probably by the lips and tongue that the creature gathers the leaves on which it feeds, for according to the accounts of the natives it lives entirely on foliage and small twigs. Like all living ruminants (except the camel), it has no front teeth in the upper jaw. The molars are very like those of the giraffe.

My first examination of the skull and skin of the okapi caused me to name it tentatively *Helladotherium*. The *Helladotherium* was a giraffe-like animal that existed in the Tertiary Epoch in Greece, Asia Minor, and India. In India the *Helladotherium* attained a very great size, but the Greek specimens were not quite as large as the modern giraffe. The *Helladotherium* was hornless, like the okapi, and in another point it resembled this animal, because the neck was not disproportionately long, and the fore and hind limbs were nearly equal in length. The okapi bears on the frontal and nasal bones three slight prominences, which may be the commencement of horn-cores. These are covered outwardly with little twists of hair. From the shape of the skull, which is straight and not arched, Professor Ray Lankester argues that the okapi has never developed horns. Though the okapi bears certain superficial resemblances to the *Helladotherium*, it is probable, on the whole, that it comes nearest in relationship to the giraffe. Being, however, sufficiently different from

both, it has been constituted by Professor Ray Lankester a separate genus, to which he has given the name *Okapia*.

So far as is yet known, the existing range of the okapi is confined to the northern part of the Congo Forest, near the Semliki River. The okapi is found in the little territory of Mboga, which is an outlying portion of the Uganda Protectorate. It is also found in the adjoining province of the Congo Free State. This same forest, I believe, conceals other wonders besides the okapi, not yet brought to light, including enormous gorillas. I have seen photographs of these huge apes, taken from dead animals which have been killed by the natives and brought in to the Belgians. A careful search might reveal several other strange additions to the world's mammalian fauna.

Quite recently fossil remains of giraffe-like animals have been found in Lower Egypt, as well as in Arabia, India, Greece, Asia Minor, and Southern Europe. It is probable that the okapi and the giraffe are the last two surviving forms of this group in tropical Africa. The giraffe has escaped extermination from the attacks of carnivorous animals by developing keen sight, wary habits, and a size of enormous bulk. The giraffe, unlike the okapi, prefers relatively open country, dotted with low acacia trees, on which it feeds. Towering up above these trees, the giraffe with its large eyes can scan the surrounding country from an altitude of twenty feet above the ground, and in this way during the daytime, and possibly on nights that are not too dark, can detect the approach of a troop of lions, the only creature besides man which can do it any harm. Man, of course, has done his level best to exterminate the mammoth, the Ur ox, the quagga, the dodo, and the auk. But for the presence of man, the giraffe might have been one of the lords of the earth. The defenceless okapi, however, only survived by slinking into the densest parts of the Congo Forest, where the lion never penetrates, and where the leopard takes to a tree life and lives on monkeys. The only human enemies of the okapi hitherto have been the Congo Dwarfs and a few Bantu negroes who dwell on the fringe of the Congo Forest. How much longer the okapi will survive now that the natives possess guns and collectors are on the search for this extraordinary animal, it is impossible to say. It is to be hoped, however, earnestly, that both the British and Belgian Governments will combine to save the okapi from extinction.

All three species of African buffalo—*Bos caffer* (the well-known South or East African buffalo); *Bos æquinoctialis*, the Central African buffalo of Abyssinia and Lake Chad; and *Bos pumilus*, the little red Congo buffalo—are represented in the Uganda Protectorate. The last-named is only found within these limits in the country on the Congo border, in the western part of the District of Toro. Its range extends to the easternmost limits

of the great Congo Forest. (It is said, however, to be found in the forests on the eastern side of Lake Albert Edward.) This creature would really seem to be a degenerate development of the African buffalo, and not a more primitive bovine. The least specialised of all the African buffaloes is the Central African type, which is found in Kiagwe (a district of Uganda proper), and perhaps also in Karamojo and the north-eastern part of the Nile Province. This animal has a much less marked development of frontal boss on the horn than in *Bos caffer* and *B. pumilus*. The horns are also proportionately longer and flatter, and are turned more backwards towards the neck than is the case with the South African buffalo. The Central African type, therefore, makes an approximation to the Indian buffaloes. The South African buffalo once frequented the eastern, central, and western districts of the Uganda Protectorate, as well as the Nile Province, in great numbers. But the cattle plagues which began to ravage these countries (coming thither from Dinkaland, between the White and Blue Niles) in 1883–4 and in subsequent years wrought such havoc among the buffaloes that the South African species is now extinct in many parts of the Uganda Protectorate, perhaps only lingering in Buddu (west of the Victoria Nyanza), Ankole, Toro, Unyoro, and between the Nile and Mount Elgon. The horns of this buffalo in Uganda scarcely differ in size or development of frontal boss from those of South and South Central Africa. The Uganda Nile Province almost marks the South African buffalo's most northern limit of range, though this animal may extend its distribution near the Nile to the vicinity of Fashoda. Its place is taken northwards by the Central African type (*æquinoctialis*), the range of which in Central Uganda overlaps that of the South African form, for the Central African buffalo reaches the shores of the Victoria Nyanza in the District of Kiagwe, and is also found in Busoga.

While dealing with the wild oxen of Uganda, a few words might be said here about the remarkable long-horned cattle of Ankole. This race of domestic cattle, which is found in Southern Abyssinia and in Galaland, and which reappears again in Ankole (west of Uganda) and thence southwards to Tanganyika, is characterised ordinarily by a straight back without, or almost without, a hump over the shoulders and by horns of great length. The horns have an outward and backward curve. They are well illustrated by the accompanying photographs. This long-horned breed has in many districts of Africa mingled with the other tropical African race of domestic cattle, the humped zebu type so characteristic of India. In the Central Province of Uganda most of the cattle are of this mixed race. The long-horned type (not quite so pronounced) reappears in Africa south of the Zambezi. In a degenerate form also it is met with in Western Africa in the Mandingo countries and Senegambia.

235. A COW OF THE ANKOLE (HIMA) BREED OF CATTLE (THE COWS HAVE USUALLY LONGER HORNS THAN THE BULLS)

The interesting question arises, Did this long-horned type originate from a wild species of ox in Abyssinia or elsewhere in North-Eastern Africa? Both the long-horned, straight-backed type of ox and the humped zebu, together with the Eurasiatic cattle (*Bos taurus*) are all depicted in the monuments of ancient Egypt.

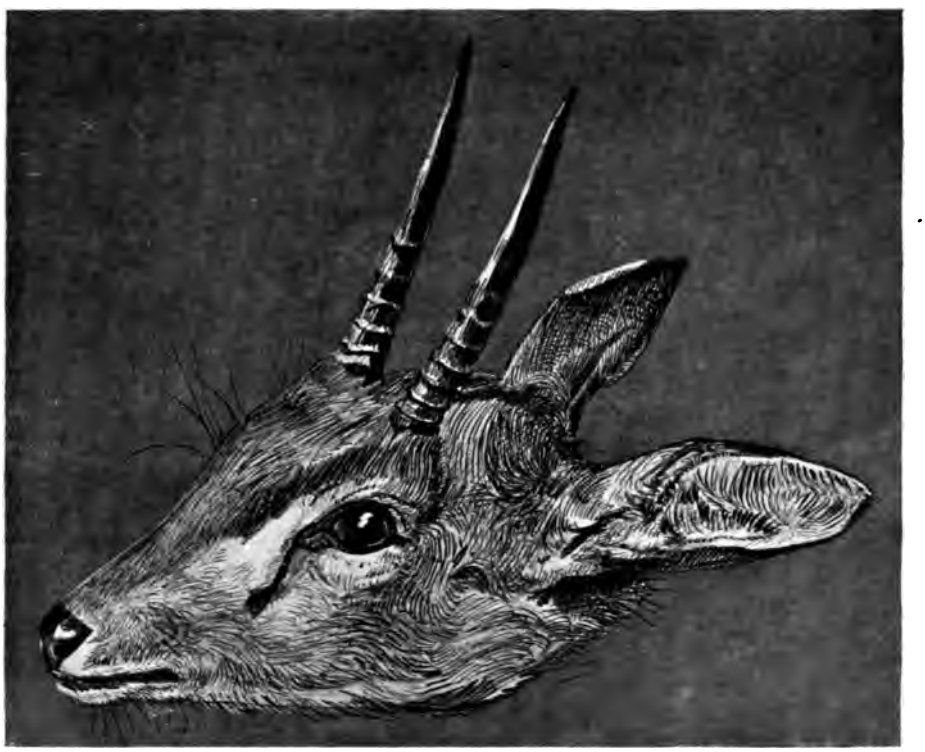
There is no form of wild sheep or goat known to exist in any part of the Uganda Protectorate, neither the ibex of the Abyssinian mountains

236. THE COMMON DUYKER ANTELOPE OF EAST AND SOUTH-EAST AFRICA (*CEPHALOPHUS GRIMMI*)

nor the maned sheep of the Nubian and Libyan deserts. The domestic sheep and goats are of those types common to tropical Africa, Arabia, Syria, and Persia, and certainly had an Asiatic origin.

Wherever there is not thick forest in the Uganda Protectorate, there antelopes of many kinds are found, sometimes in great numbers. Within the forest itself there are antelopes also, or ruminants, such as the tragelaphs, which are incorrectly included under that designation. In the dense forests of Ruwenzori and of Uganda proper the little *Cephalophus*

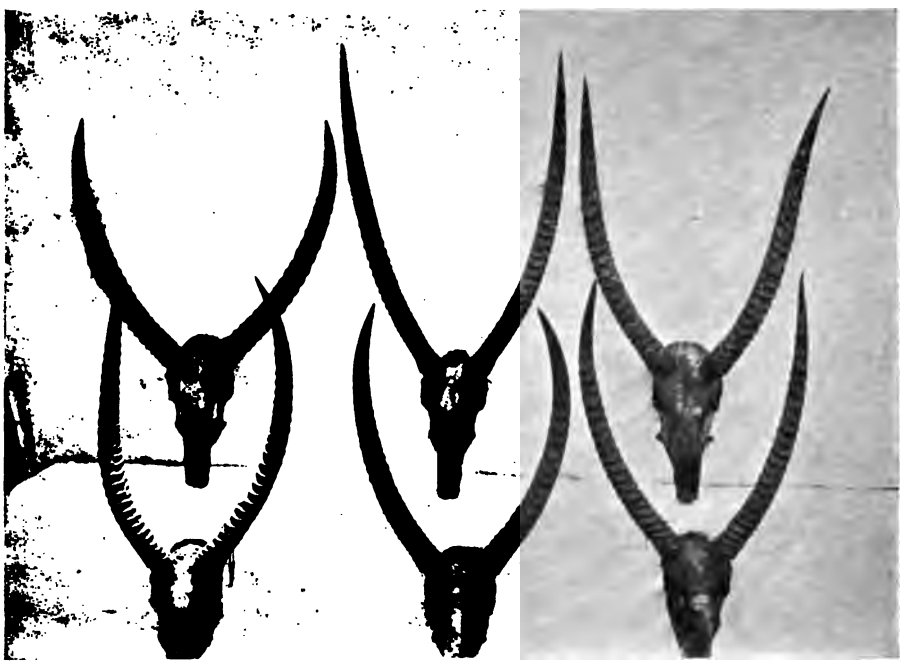
antelopes abound. On Ruwenzori these are of a species new to science, with a coat of a brilliant chestnut-red. Elsewhere there is the common duyker of South Africa, which is an ochreish yellow with black markings on the head; or there is the little blue *Cephalophus* of Uganda. This is a tiny antelope hardly larger than a hare (*Cephalophus equatorialis*), of a deep blue-grey colour inclining to black. The Baganda make beautiful rugs of the small skins of this pretty little creature (which they call "entalaganya"), many skins being neatly sewn together.



237. A STEINBUCK (*RAPHICERUS*) OF THE EASTERN PROVINCE OF THE UGANDA PROTECTORATE

Although the western part of the Uganda Protectorate contains a good deal of dense forest, and consequently many tracts in which large antelopes are not found, it has, nevertheless, in Buddu (west coast of the Victoria Nyanza), in Ankole (round the shores of the Albert Edward Nyanza), and in the Upper Semliki Valley tracts of grass-land or park-like country in which antelopes abound so far as numbers are concerned, though the species are fewer than in the northern and eastern parts of the Protectorate. In these western districts the principal antelopes found are the waterbuck

(*Cobus defassa*), Thomas's kob (*Cobus thomasi*), the topi, or bastard hartebeest (*Damaliscus*), the reedbuck, the oribi, and the eland. The most remarkable in appearance amongst all these is perhaps the waterbuck (*Cobus defassa*). It is closely allied to the South African waterbuck (*C. ellipsiprymnus*), but has a tendency to be much redder in the colour of its coat, especially on the head, which in some specimens is vinous red and bright chestnut, with bold white markings. The horns, above all, are superb. One pair we got was thirty-six inches measured



238. HORNS OF *COBUS DEFASSA* (?) FROM THE SEMLIKI VALLEY

along the curve. I give an illustration of the head of one of these magnificent waterbuck. In this particular case the horns were over thirty-two inches in length. It was one of the most beautiful sights to be seen in Africa to watch a herd of these fine creatures in the valley of the Semliki River. They had but little fear of man, so much so that one could walk about amongst them almost as freely as through a herd of deer in a park. They were moving slowly along, grazing, in thin, short grass which flowered in remarkable white flossy plumes. The waterbuck were very red in colour, with black points and touches of white about the body; the thin grass through which they moved was

emerald-green in stem and leaf, and bore this blossom of silvery white on the surface, which the wind swayed into foam-like ripples. The river lay below in bold sweeps of sky-blue broken here and there by purple-green clumps of thickly foliaged trees. As a background to this scene rose the grand heights of Ruwenzori, of a blue not much deeper than the azure of the sky, showing here and there flakes of white, which were snow or cloud. The females of these waterbuck, as indeed of all the *Cobus* genus, are without horns. Their large ears are blunt; black noses give them rather an asinine appearance.

The *Cobus thomasi* antelopes are pretty, graceful creatures, of pale straw-yellow, with black streaks on the legs, and white stomachs. Occasionally

239. THOMAS'S KOB (*COBUS THOMASI*)

there is an individual with a grey-white back, a "sport" which may be initiating a new species.

In the Nile Province, and perhaps also in Northern Unyoro, the white-eared kob (*Cobus leucotis*) abounds.

The northern parts of the Protectorate, though offering country often lacking in water and a climate which at times is unbearably hot, and the countries round Elgon, Baringo, and Naivasha, give possibly the finest sport in the way of a varied collection of big game, especially amongst antelopes. In the north-eastern part of the Uganda Protectorate there are probably a few white-bearded gnus still lingering. There are Jackson's hartebeest, Coke's hartebeest, the bastard hartebeest, the pallah, reedbuck, roan antelope, oryx, Grant's gazelle, Thomson's gazelle, Peters's gazelle, the long-necked Waller's gazelle, the waterbuck, Thomas's kob, the oribi, the madoqua, various kinds of duyker, kudu, eland, and bushbuck, and, in

the Mau forests, a tragelaph of a new kind not yet fully described, but allied to the broad-horned tragelaph of West Africa.

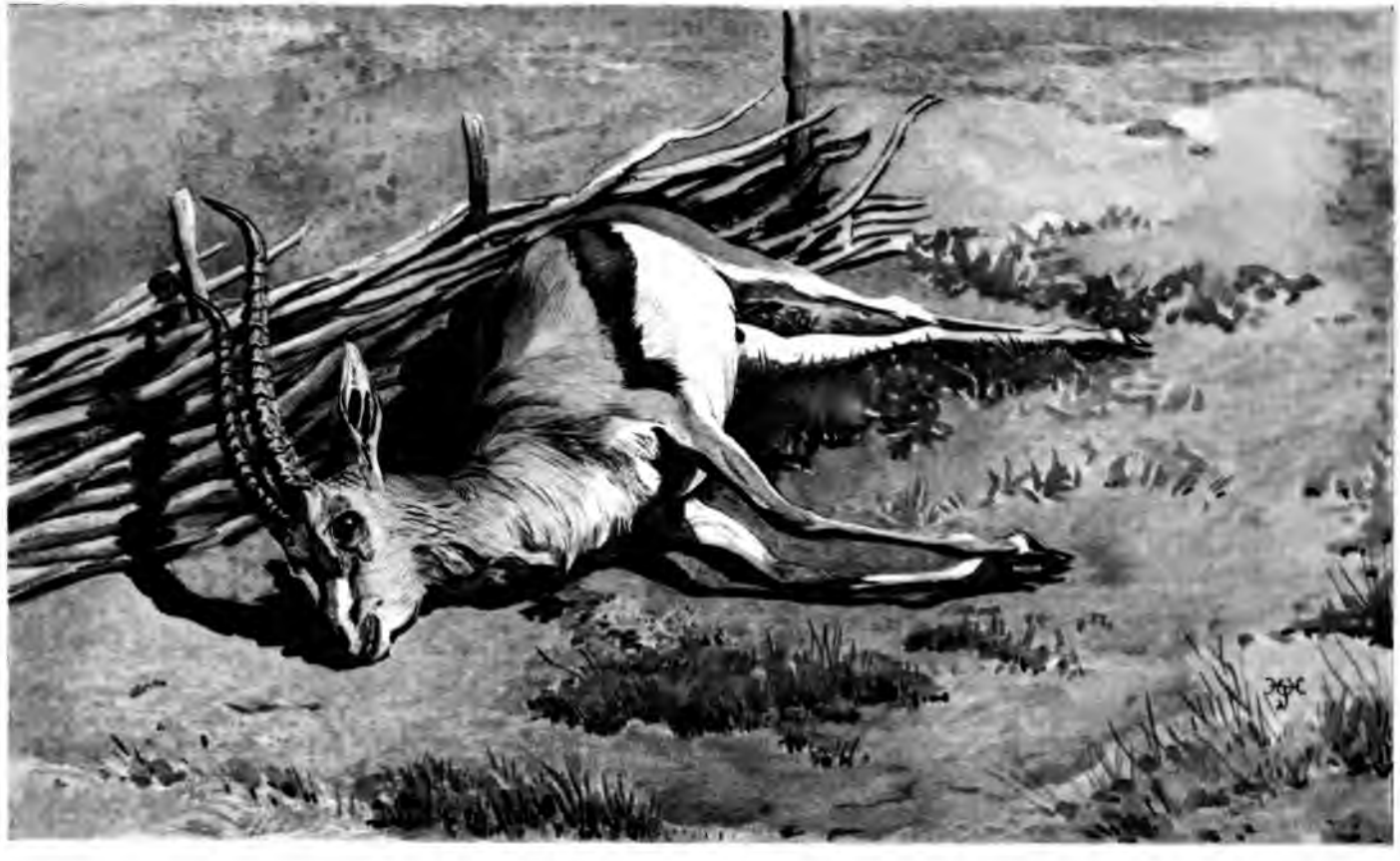
In the Nile Province and in Northern Unyoro the handsome Baker's roan antelope is found.

Amongst Uganda antelopes the pallah is a very fine form. This animal is found in the north, north-central, and eastern parts of the Protectorate. It ranges thence northwards to the vicinity of Abyssinia, and southwards (formerly) to Cape Colony, while another species is found in parts of the Congo region. So far as I know, the pallah type, like the rhinoceros and

240. WHITE-EARED KOB (*COBUS LEUCOTIS*)

zebra, does not stretch across the continent to the Niger. It is a beautiful and interesting type of antelope, which appears to be rather an old form and very near to the stock from which the hartebeests and gnus sprang. The pallah, on the other hand, is allied to the gazelle group, and it may have been the connecting link between these antelopes and the bubalines. In colour it is a rich chestnut-brown with a pinkish gloss. The median line of the back and tail, the outlines of the hindquarters, the tips of the ears, and patches on the feet are diversified by bold black markings. The skin of an animal in good condition has a beautiful, satin-like gloss, which is well represented in the accompanying photograph.

I give here an illustration (photograph from a dead animal) of a very



Gazella thomsoni.

remarkable ruminant, Speke's tragelaph (*Limnotragus spekei*), a creature which inhabits the large swamps of the more tropical portions of the Uganda Protectorate. The tragelaphs are a group of hollow-horned ruminants incorrectly included under the designation of antelope. They are in reality no more antelopes than they are oxen, and, as a matter of fact, are more closely allied in origin to the last-named group. All hollow-horned ruminants—oxen, tragelaphs, capricorns, goats and sheep and antelopes—are very closely allied in structure, but they might be more correctly grouped than they are, in homogeneous divisions. The capricorns, goats,

241. BAKER'S ROAN ANTELOPE (*HIPPOTRAGUS BAKERI*)

sheep, and antelopes have one almost constant feature in the structure of their horns. These are annulated with distinct rings of growth, which in most instances develop into very apparent transverse ridges. In the oxen and tragelaphs there are but faint traces of these regular annulations, if, indeed, there are any traces at all. The common ancestor of the oxen, the tragelaphs, and the great group of ring-horned ruminants had short triangular horns, the laminations of which may have taken the form of regular rings of growth. The lowest existing type of ox—the anoa—has horns nearly triangular in section. The early tragelaphs, like the nilghai of India, also had triangular horns. Early in the history of the tragelaphs, however, the horns in their upward growth began to take a spiral direction.

242. A PALLAH ANTELOPE (BARINGO)

243. HEADS OF COKE'S HARTEBEEST (*BUBALIS COKEI*)

and these spirally directed horns (though this feature has independently developed in certain antelopes and goats) are universally typical of the existing tragelaphs, and are found in a marked degree in such forms as the kudu.

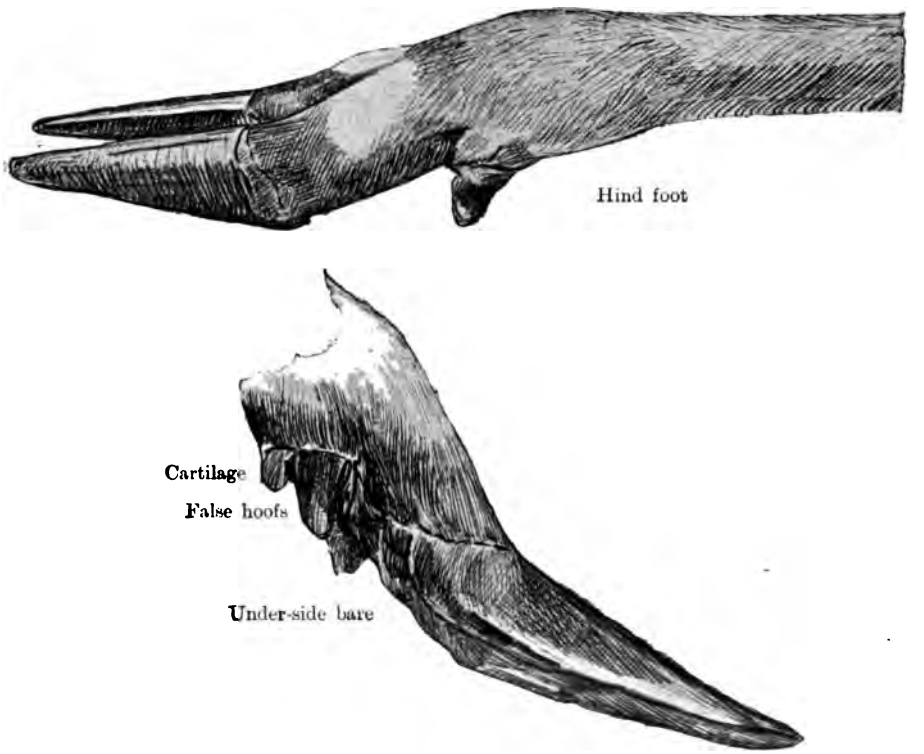
At the present day there are existing in the world one tragelaphine species in India, the nilghai, and about fourteen valid species in Africa, amongst which may be enumerated the eland, kudu, dwarf kudu, broad-horned tragelaph, the bushbucks, and the water-loving Speke's tragelaph. This animal, which has a congener called Selous' tragelaph in Barotseland, is really a large form of bushbuck which has become specially adapted to an existence in the water, especially in marshes. There is also a West African type which from its handsome appearance is called the "Pleasant" tragelaph. In all these three forms—*Limnotragus spekei*, *L. selousi*, and *L. gratus*—the hoofs are much prolonged, as can be seen in the accompanying illustration. The under side of the foot is without hair, the false hoofs are much developed, the two toes spread widely, and the creature is thus able to walk with ease over spongy vegetable growth. In colour Speke's tragelaph is a dark mouse-brown, tending sometimes to chocolate. The young and the females are a little more chestnut in colour, and have faint white markings. The males alone develop horns. This creature spends the greater part of the day-time in the water, with little more than its nose showing above the surface. It feeds on the young shoots of papyrus and on the leaves of marsh

plants. Nevertheless, it is quite a mistake to suppose, as some travellers have done, that it is unfit for progression on land. It can take tremendous leaps, and gets over the ground at a great pace, little, if at all, hindered by its splay feet.

The orycteropus, or ant bear, a huge edentate of nocturnal habits, is found in the eastern part of the Uganda Protectorate, though not, I believe, in Uganda proper or in the Western Province. It is, however, very common in the Rift Valley, round about Lake Baringo, and in Kavirondo, to the south of Mount Elgon. Here it enters largely into the native beast stories. The only other edentate in the country, of course, is the manis, a creature so utterly distinct in formation from the ant bear (though not so far removed from the armadillos and other edentates of South America) that several biologists have considered the orycteropus to have

244. SPEKE'S TRAGELAPH (*LIMNOTRAGUS SPEKEI*)

no affinities with the other edentates, but to be separately descended from some other mammalian stock. The manis lives on trees, and, like the orycteropus, feeds on ants and termites, licking them up with the long, sticky tongue which is protruded from its tiny mouth. In captivity the manis seldom thrives, though it can be got to eat finely chopped meat and milk. It is covered from its snout to the tip of its tail with



245. FEET OF *LIMNOTRAGUS SPEKE.*

large overlapping scales of a horny texture, though there is hair on the under side of the body. The mouth is reduced to a mere hole, but the creature has means of offence in its sharp claws and of defence in its horny armour. When in captivity, until tame or unless trying to escape, it rolls itself into a ball. In this condition one must be wary about taking it up, as it has a way of straightening itself and nipping the fingers between the hard serrated scales. The manis of Uganda, like that of West Africa, sometimes, if it descries a possible enemy whilst

climbing a tree, flings its body backwards and remains perfectly immobile, with the short front legs tucked up, whilst the tail is firmly pressed against the tree-trunk. The sharp toothed edges of the scales press into the bark, and with the hind feet maintain the creature in position. The body may fall back to an angle of 30° from the vertical tree-trunk. In this attitude the manis resembles exactly the grey, scaly commencement of a branch which near its junction with the trunk has

246. FEMALE OF GRANT'S GAZELLE

been broken off. The manis naturally attracts a great deal of attention from the natives, enters into their stories, and is one of the totems of the Baganda clans.

The Uganda Protectorate is very rich in birds. In no part of Africa that I have ever visited has bird life seemed so abundant and so omnipresent. In attempting to describe the landscapes in the first chapters of this book it has been constantly necessary to refer to the bird element in the scenery. The least observant European sojourner in the Rift Valley

THE KING OF THE WIDOW-FINCHES. (*CHERA.*)

must be conscious of the black chats with white patches on their wings, hopping about the settlements, courting, singing, fluttering their wings, and turning back their tails. The flamingoes on Lakes Naivasha and Hannington, the colleges of marabou storks, the companies of crown cranes, the solitary stalking secretary bird, the wheeling kites, the griffon vultures, the black and white Egyptian vultures with yellow beaks and yellow legs, the gorgeous, glossy starlings, with their plumage of iridescent blue-green and copper-red, the brightly coloured or extravagantly plumed widow finches and weaver birds are all familiar objects in the landscapes of the Eastern Province. The grey parrots, and the many richly plumed plantain-eaters and turacos in the forests of the Central, Western, and Uganda Provinces, the screaming fish eagles, the brown *Necrosyrtes* vulture, the grey *Spizaëtus* eagles, and the handsome bateleur and black-crested eagles, the sun birds, barbets, green parrots, green pigeons, blue and mauve rollers are seldom absent from one's sight in the daytime as one traverses the forests and the grassy down country in Uganda, Toro, Busoga, and Elgon. The shores of the Victoria Nyanza and of the other lakes, the marshes and back-waters of the Nile, are frequented by countless water-birds, by whale-headed storks and saddle-billed storks, by herons of gigantic size or minute, rail-like form—herons that are snow-white in many species, or dark slaty blue or fawn-colour; by spur-winged geese, Egyptian geese, knob-nosed ducks, and the exquisite little "pygmy goose"; by pelicans, cormorants, and darters, to name only a few among the more prominent types.

I will attempt to give a few notes concerning the more common, striking, or rare members of this avi-fauna.

In India and Africa there is a group of birds related to the finches and starlings which are called weaver birds from their habits of interlacing grass and leaf stalks into a regular network to form their pendent nests, A section of these weaver birds is known as widow finches, from the fact that the male during the breeding season develops his tail feathers into extraordinary plumes out of all proportion to the size of his body. The most extravagant of all these birds in the development of tail is *Chera progne*, of which a picture is given. This bird is found in parts of South Africa, and reappears again (strange to say) in the north-eastern part of the Uganda Protectorate. In this *Chera* (which is about the size of a thrush) not only are the plumes of the tail such as would be remarkable in size in a gamecock, but the primaries and secondaries of the wings appear also to be permanently enlarged out of all proportion to the body, in order to assist in supporting this enormous tail. The female is a small finch-like bird, with a flat tail not out of the common. The male in this species is supposed to drop these heavy plumes after the breeding season. When

these birds are flying through the air they seem to be almost supported, as by a parachute, on the outspread tail feathers, and to float on these expanded plumes. When the bird is in full flight, yet slackening pace with a view to perching on a twig, the tail feathers curl forwards and diverge in a most shapely manner. Another common widow finch in Uganda is *Penthetria ardens*. It is like anything but the conventional widow in its gorgeous plumage of head and neck, just as its companion in my water-colour drawing is known to "the trade" as the "bishop finch" (*Pyromelana*), though it does not resemble the usual clothing of a bishop. In the spring months in that part of the Uganda Protectorate which is

247. *HETEROCORAX CAPENSIS*

north of the equator (but perhaps again in the autumn) the males of these widow finches develop extravagant tail plumes in the genera *Chera*, *Penthetria*, and *Vidua*, and in other kinds, such as the bishop finch, blaze out instead into gorgeous red or yellow body plumage. The male would then appear to be courted or followed by five or six females, who are assiduous in claiming his attentions. These pretty creatures are never absent on bright, sunny days from the landscapes of flowering grass and blossoming shrubs. The male, followed by his covey of adoring hens, flits from one grass patch to another, and the air is full of the harsh little cries which come from the squabbling and jealous hens.

There are few districts in the Uganda Protectorate without the beautiful

'Widow' Birds and Bishop Finches (*Penthetria* and *Pyromelana*):
Grasslands, Eastern Province.

glossy starlings, but these birds appear to be more than usually abundant or prominent round about Lake Baringo. Being quite unmolested by the Masai and Kamásia, they frequent the outskirts of villages in large numbers, making an impressive display as they settle in flocks on the bare skeletons of leafless trees.

In the Uganda Protectorate the crow tribe is represented, in the lower lying and more tropical portions, by the well-known black and white crow of tropical Africa; on the high plateaux and mountains by the white-necked raven, and also by a black crow which is apparently *Heterocorax capensis*. On the Nandi Plateau is found a remarkable looking corvine,

248. *RHINOCORAX AFFINIS* (THE SLENDER-BILLED CROW OF NANDI)

which I illustrate. This bird in habits and general appearance strongly resembles a rook. It has a way of perching on trees in the middle of a camp and cawing until the exasperated traveller who suffers from nerves is inclined to go out and shoot it. Its scientific name is *Rhinocorax affinis*.

There is the usual abundance of bulbuls, warblers, and thrushes in common with the rest of tropical Africa. In connection with these birds I am weary of contradicting the foolish old dictum that in the tropics birds, though gorgeous of plumage, do not sing. In Uganda, as in British Central Africa, one's ear is constantly delighted with the songs of thrushes, warblers, and bulbuls.

Amongst barbets may be mentioned the very common and very beautiful

crimson-breasted barbet, found in all the well-wooded regions of the Protectorate, and illustrated in this book.

Honey-guides (*Indicator*) are present, but one does not hear much from the natives of their services in leading man to the hives of wild bees, though the practice is not unknown to the natives. There is a very common and very handsome species of purple and white cuckoo (amongst many other birds of this tribe). The mouse birds (*Colius*) play in every thicket, but I have not noticed them as present in the dense tropical forests.

Amongst the most beautiful and remarkable birds of the Uganda Protectorate must certainly be named the great blue plantain-eater. This bird, which is called scientifically *Corythæola cristata*, is the largest member of that remarkable group of purely African birds which are known as the plantain-eaters or turacos. The family of the turacos (*Musophagidæ*) occupies a rather central position in the classification of birds. The nearest relations of the group are with the cuckoos, but there are also interesting affinities to *Opisthocomus*,* to the parrots, and perhaps also to the gallinaceous birds. There is a remarkable superficial resemblance between the species now illustrated—the great blue plantain-eater and the tree-haunting gallinaceous curassows of South America. As already stated, the range of the *Musophagidæ* is confined to Africa south of the Sahara Desert. It is a remarkable fact that all its genera are represented in the Uganda Protectorate, a fact which cannot be cited of any other part of Africa, for here the western, eastern, and southern forms all meet. Here we have the prince of the order, the great blue plantain-eater (*Corythæola*), the violaceous plantain-eater (*Musophaga*), the grey plantain-eater (*Schizorhis*), the *Gymnoschizorhis*, the *Gallirex*, and the turaco (*Corythaix*). The great blue plantain-eater is found in Uganda proper, and thence westwards throughout the Congo basin. It is a very bold bird, rather preferring the vicinity of human habitations than averse to the proximity of man. Through the hours of daylight it is for ever shouting, boo-hooing, braying, and shrieking from the branches of big trees. It is perpetually pursuing its comrades or mates with sportive leaps from branch to branch. When too closely observed by man, the bird has a woodpecker-like habit of dodging round the bole of a tree, keeping out of sight and out of aim. The female in this genus (unlike the others) is distinctly smaller than the male and much more dingily coloured. In size the male bird is equal to a large pheasant.

The hornbills are well represented. There is the strange-looking ground

* A strange and primitive type of tree-haunting bird frequenting the forests of South America—the "hoatsin."

THE GREAT BLUE PLANTAIN-EATER (*CORYTHŒOLA CRISTATA*).

hornbill, an instance of force of circumstances transforming a "small" bird of arboreal habits (in its origin) into a large ground-frequenting bird, the short legs of its family becoming long, and its whole outward appearance presenting a remarkable but misleading resemblance to the gallinaceous birds. In the forests may be seen—and heard—the large black and white hornbills with enormous helmeted beaks. The cry of these birds is unusually loud, penetrating, and varied in sound, sometimes resembling the raving cries of a woman maddened by fright and pain, at other times being the caricature of a donkey's bray. The smaller hornbills of the genus *Toccus*, with their black, white, and brown plumage, and black or red beaks, are very common, especially in the east and central parts of the Protectorate. Being absolutely uneatable and not usually attractive in plumage, they are bold, and constantly thrusting themselves on the traveller's notice.

Amongst parrots, there is the grey parrot of West Africa, not differing at all in colour of plumage from the parrots found along the course of the Congo. The range of this bird would appear to be increasing rapidly at the present time. About fifty years ago (according to the stories of Arabs and Swahilis) it had just reached the west coast of Tanganyika, and had perhaps penetrated eastwards in the Uganda Protectorate as far as Kavirondo. It has now made its way across to the north end of Lake Nyasa and to the east coast of Tanganyika, and thence up the course of the Malagarazi River. From Kavirondo it has spread eastwards to the Nandi forests and thence right across the Rift Valley to Kikuyu, whence it will probably soon reach the east coast of Africa. Already this bird would seem to be developing sub-species that may in time become valid species. Besides *Psittacus temneh* of Sierra Leone, which is a distinct species and a grey parrot without a red tail, the grey parrots of Prince's Island, off the coast of Lower Guinea, are becoming different in coloration to the ordinary type. The grey plumage is developing into a dull purple, while the scarlet tail is becoming violet-red, the upper mandible of the beak has lengthened, and in some respects the parrot in Prince's Island is taking the place of the raptorial birds, which the natives say it is driving from the island. In the interior of Angola and the south-western part of the Congo basin the grey of the grey parrot is turning to white and pink, some of these birds actually becoming pink all over, with a scarlet tail. In Uganda the plumage is the normal colour as we know it—ash-grey and whitish grey, with a bright scarlet tail. The young birds are captured by the natives from the nesting places (holes in trees) and are easily tamed. Yet as far as I can ascertain the Baganda never commenced this practice until taught to do so by the Swahili porters from the coast, who of course were incited thereto by the Europeans and Indians; for it very rarely

occurs to the Negro as a matter of initiative to domesticate the birds and beasts around him. In parts of the Uganda Protectorate there are love-birds, and there are several species of the *Pœocephalus* (usually green, grey, and sulphur-yellow in colour).

There is nothing specially remarkable about the gallinaceous birds. All through the Protectorate guinea-fowl are extremely abundant, but they appear to belong only to the two common species, the crested (*Guttera pucherani*) and the horned (*Numida ptilorhyncha*). The crested crane is found throughout the Protectorate, but I do not think there is any other member of the crane family within its limits.

As regards birds of prey, a word might be said about the distribution of the vultures. Throughout the Protectorate is found that common—and commonplace—*Necrosyrtes monachus*, a small brown vulture with a whitish head and neck. This is the common vulture from Sierra Leone on the west to Mombasa on the east, and from Fashoda on the north to the Zambezi on the south. It is a near ally of the much more strikingly coloured Egyptian vulture. This last bird, however, only penetrates into the Rudolf Province and Rift Valley in the eastern part of the Protectorate. Although the big vultures of the genera *Otogyps* and *Gyps* are entirely absent from the forested regions of Africa, they make their appearance in the Uganda Protectorate in two directions in the same arid portions of the Eastern Province and the countries round Lake Rudolf, and again in the dryer part of the Semliki Valley, between Ruwenzori and the Congo Forest. As a general rule it should be noted that between the Zambezi on the south and the more arid regions of the Northern Sudan, vultures as devourers of dead men and beasts are not such common objects as in the desert or extra-tropical regions of the African continent. The common *Neophron* vulture frequents the vicinity of all camps and settlements in order to feed on offal and excrement much more than for the purpose of devouring corpses. Marabou storks and kites do a great deal more of this work than the vultures, besides, of course, the hyænas and jackals. Nevertheless, wherever the big vultures are present one may expect to see the truly picturesque spectacle of the huge-winged, by no means ugly birds hopping and flapping and croaking and guzzling over a dead body, so covering up the bloody part of the scene with their splendid wings as to deprive it of any element of horror.

The black-crested eagle and the screaming chocolate and white fish eagle are very common and very beautiful objects amongst the Uganda birds.

The bateleur eagle is perhaps in coloration the brightest and most conspicuous of all the birds of prey. This eagle is remarkable for its very short tail feathers. These are reduced to a length scarcely exceeding

three inches, so that the bird when flying appears to be almost without a tail. The bateleur eagle is solely confined in its distribution to those parts of the African continent which lie within the tropics and outside the forest regions of West Africa. This eagle was probably first made known to science from Senegal, and its name—"bateleur"—appears to be a French version of a Senegalese name. In the classification of the eagles it is usually placed with the sea eagle group, the members of which often exhibit bright contrasts of colour in their plumage. The bateleur eagle lives chiefly on small mammals. It hangs almost motionless in the air with widely expanded wings, or swoops in a series of circles, its large eyes being fixed intently on the earth beneath in search of some creature on which it may make its fatal descent. When it strikes its prey on the ground it almost invariably opens the wings and brings them round in a semi-circle, ready to shield its body from a counter-attack or possibly to protect its prey from any counter-swoop by a hungry rival. This eagle is never met with in thickly wooded country, but is usually characteristic of the drier portions of Africa, or at any rate of the grass-lands.

The sacred and iridescent ibises are met with very frequently—the former wherever it is open and marshy, and the latter rather more amongst forested regions. Beautiful white egrets of several species and different sizes rejoice the eye with their graceful forms and effects of absolute snow-white. The smaller kinds follow the cattle about to relieve them of insects. The larger birds fish in all the creeks and pools. When I was residing at Entebbe large flocks of the smaller egrets would appear from time to time on my lawn, hunt busily there for grasshoppers, and then disappear, being so conscious of their usefulness as to betray little or no fear of man.

Amongst storks I have already alluded to the frequently-met-with marabou. The beautiful saddle-billed stork is fortunately still common, and I ventured to place it on the protected list in order to preserve it from needless attack. This, perhaps, is the handsomest of all the storks. Its long beak is crimson-scarlet with a black band, and with a saddle or excrescence of bright yellow. The neck is glossy bluish-black, the wings and tail are iridescent copper, bottle-green and blue-black, the rest of the plumage being snowy white. Another handsome stork is the tantalus, with a long curved beak of lemon-yellow touched with crimson, black wings, and white body, and the shoulder feathers tipped with the most exquisite rose-pink.

The whale-headed stork is perhaps the most remarkable bird in Uganda. In its range and distribution it seems to be very nearly limited to the area of the Uganda Protectorate, though it extends north-west down the Nile as far as the vicinity of Fashoda, and into the Bahr-al-Ghazal

region.* The whale-headed stork is of doubtful affinities: in all probability it is more closely related to the herons than to the storks. It really seems to be an independent development from some primitive stork-like form, like the existing tufted umbre (*Scopus umbretta*). This is a brown bird with a short, broad beak not unlike that of the whale-headed stork. The *Scopus* is confined in its range to tropical Africa. *Balæniceps rex* is very rarely seen on the shores of broad rivers or open spaces of water; it generally frequents marshes and narrow backwaters or inlets. It feeds principally on fish, but probably also swallows crustaceans and molluscs. These birds are generally seen in pairs, presumably male and female. The first specimens were sent to England from the Upper Nile by the traveller, trader, and consul, Petherick. They were supposed to be restricted in their distribution to the Bahr-al-Ghazal and the Upper Nile. It is forty-one years since these earlier specimens were received by the British Museum. The revolt of the Mahdi cut us off from access to the regions of the Upper Nile, and for some reasons I cannot give no one appears to have observed the existence of this bird on the northern shores of the Victoria Nyanza. Soon after we reached Entebbe, in Uganda, however, my assistant, Doggett, when out shooting one day brought home a specimen of *Balæniceps*, and it was afterwards found to be quite common in the creeks close to the Government station at Entebbe. When the British Museum had been supplied with sufficient specimens, the bird was placed on the protected list, and it is to be hoped every effort will be made to preserve from extinction so remarkable a creature.

Grebes are very common on the smaller crater lakes and most other small pieces of water in the Uganda Protectorate. The various ducks and geese in their effect on the landscapes have been alluded to in many passages of this book. Those interested in their distribution can find the species enumerated in the appendices of this chapter. The striped-headed gull, one or more species of terns, and red-beaked scissor-bills are common on the great lakes. The plovers, thick-knees, lily-trotters and coursers, the snipe, knots, and stilt-plovers, are all common African species, and do not, so far as I know, offer anything peculiar to the Protectorate. The same may be said about pigeons, though attention should be called to the beautiful, if common, *Columba guinea*, a West African bird which is frequently met with in the well-wooded parts of the Protectorate, and which I have illustrated in this book.

* It seems curious that a fish-eating water-bird should be restricted in its range to the Nile basin. It may be that the Upper Congo and Tanganyika are not marshy enough. Sir Henry Stanley asserts that the *Balæniceps is* found on the Upper Congo, and the present writer believed as far back as 1882 that he had seen it on the marshes of the Kunene in South-West Africa.

The ostriches found within the Uganda Protectorate appear to be the northern and East African species. At the present time there are three types of ostriches in Africa—that of South Africa (south of the Zambezi); the East African ostrich; and the northern ostrich, which was formerly

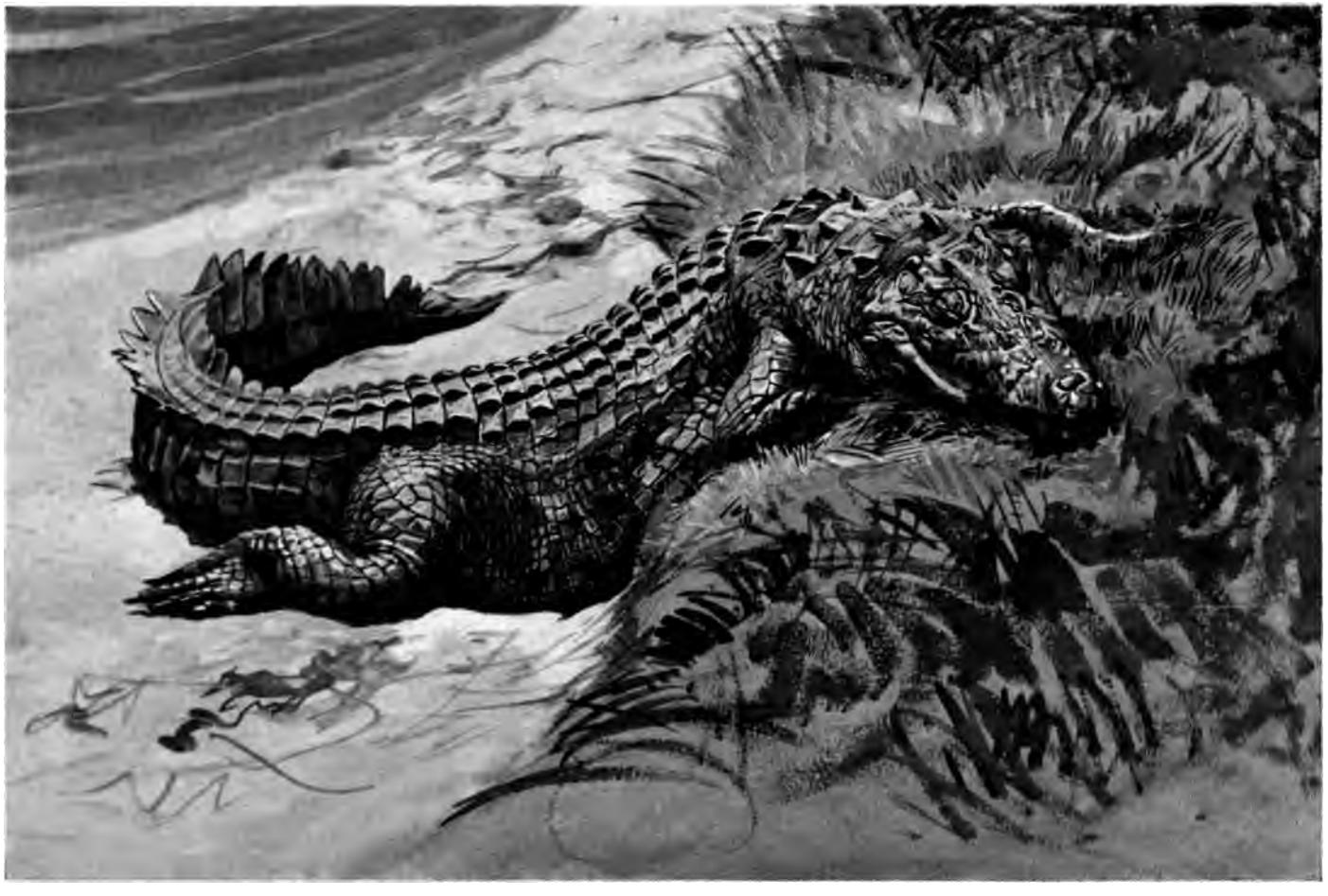
249. THE OSTRICH OF THE NORTHERN PARTS OF THE UGANDA PROTECTORATE (*STRUTHIO CAMELUS*)

found right across the Sahara from the Sudan and Nigeria to Tunis and Algeria, and from Senegal eastwards to Syria and Arabia. (The ostrich also in pre-historic times existed in South Russia and Western India.) The Somaliland or East African ostrich has, as a rule, poor plumes in the male, and the feathers of commerce are for the most part derived from

the northern and southern types of the bird. The feathers of the Uganda ostrich are of good quality. The illustration here given is taken from life. It represents a fine young male ostrich from Karamojo, a country in the north-east of the Uganda Protectorate. An attempt is about to be made in the eastern part of the Uganda Protectorate to start ostrich farms.

Amongst reptiles, the common African crocodile is naturally the most prominent. These creatures as they lie on the rocks and sand appear to be of enormous size and length, but actual measurements are apt to show that these estimates by the eye are untrustworthy. The biggest crocodile we ever shot scarcely exceeded twelve feet in length, though it looked a monster, and I believe fifteen feet is the greatest recorded length of any measured crocodile that has been killed in the Uganda Protectorate. Their attacks on the people, as on the beasts that come to the water's edge, are as serious as elsewhere in Africa. The carrying away of a man or woman by a crocodile was at one time a daily occurrence at Entebbe. Of late attempts have been made to put in practice an excellent idea which originated in some other Protectorate—that of offering small rewards to the natives for crocodiles' eggs, which are then carefully destroyed. A continual war is waged by Europeans desirous of a good kind of rifle practice on the crocodiles frequenting the vicinity of their settlements, and by constant persecution this nuisance may in time be abated. We all know that the attacks of man have completely driven the crocodile away from the Nile below Khartum, though at one time within the historic period this creature was found down to the shores of the Mediterranean and in the lakes which now form part of the Suez Canal.

The crocodiles of the Victoria Nyanza, and, indeed, of any other African lake or river, are fond of crawling out of the water during the daytime to bask in the sun and digest their food in this pleasant warmth. They like to hoist the head and fore-limbs above the rest of the body, and frequently assume an attitude exactly like that depicted in my coloured illustration. The crocodile has probably no more real humour in him than a sea anemone, and yet to our eyes nature has mingled with his ferocious aspect a hypocritical leer which suggests false sentiment and "crocodiles' tears." The peculiar scoop of the under jaw at its junction with the upper jaw, the grinning teeth, and the placidly closed eyelids suggest the foolish smile which might pass over the face of a sleeping drunkard, as though this creature in its reptilian slumber was dreaming of some unusually toothsome human whose tender body it has recently champed with gusto. I have sometimes seen through a field-glass the most ridiculous and incongruous spectacle of sleeping crocodiles, each



"Happy Dreams": a sleeping Crocodile.

wearing this ineffable and foolish leer, being solemnly gazed at by storks, cranes, herons, and other water-birds perched above them on

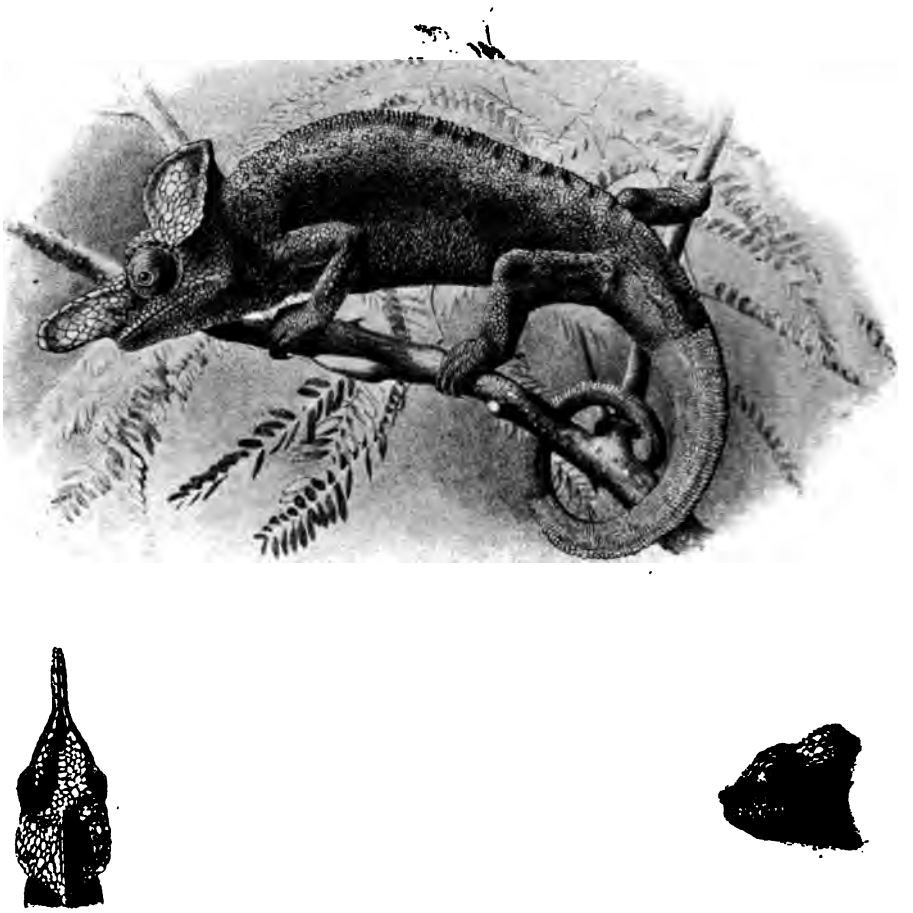
250. A NEW CHAMELEON FROM RUWENZORI (*CHAMÆLEON JOHNSTONI*)

one leg, and apparently contemplating the monsters more in sorrow than in anger.

Amongst chameleons, two very extraordinary new species have been discovered by us on the slopes of Ruwenzori. I am enabled to give

illustrations of both by the courtesy of the Zoological Society. It will be observed that one of these chameleons in the male develops three horns.

Snakes are abundantly met with in Uganda, but although many poisonous



251. ANOTHER NEW CHAMELEON FROM RUWENZORI (*C. XENORHINUS*)

species are present, such as cobras, tree cobras, and puff-adders, it is very rare indeed that one hears of death from a snake bite. When this does occur, it is generally attributed to either the tree cobra (which at certain times of the year goes out of its way to attack passers-by—no doubt in

the breeding season) or to the puff-adder. The dreadful viper, or puff-adder, which bears the scientific name of *Bitis gabonica*, is very common in Uganda, and its bite is perhaps more rapidly and surely fatal than that of any other venomous snake. Nevertheless, it is not, as far as I can learn, a creature of aggressive malice, and is so far sluggish that the specimen from which this painting was made was kept by me in captivity for some time with very little objection on its part. It used occasionally to escape, and would then allow itself to be picked up and brought back by the negro servants without any attempt at biting. In the cage where it lived, however, were three enormous pythons, and the pythons used to annoy it by rolling their huge bulk over its body. When they were particularly exasperating, it would turn and bite them, and a bite with its formidable fangs would be followed by the spurting forth of two little streams of blood. Nevertheless, the death of the pythons did not follow as instantaneously as we knew would have been the case with warmer-blooded creatures; they only became ill, and lingered for two days before they finally died.

The coloration of this puff-adder is perhaps more vivid and beautiful than in any other snake. It is like a carpet pattern of alternate black, greenish yellow, mauve, and buff; while by the inflation of the body white edges to the scales are often shown. Soon after death these colours fade away completely and the dry skin gives no idea of the blooming tints of the live animal. I write "blooming," because the beauty of these colours is enhanced by a delicate bloom which appears on the scales, and which softens the tints so that the whole design might have been painted on velvet.

Large pythons are very common, especially in Uganda proper. They eat beasts from a goat to a rat in size, and even condescend to devour frogs and toads. They rarely, if ever, seem to attack human beings, and the natives have little dread of them, often putting their hands into the hole where the python takes refuge and dragging out the unwilling snake. I kept a number of these snakes in captivity for about a year, and some of them became quite tame. The longest python we measured reached to nearly seventeen feet.

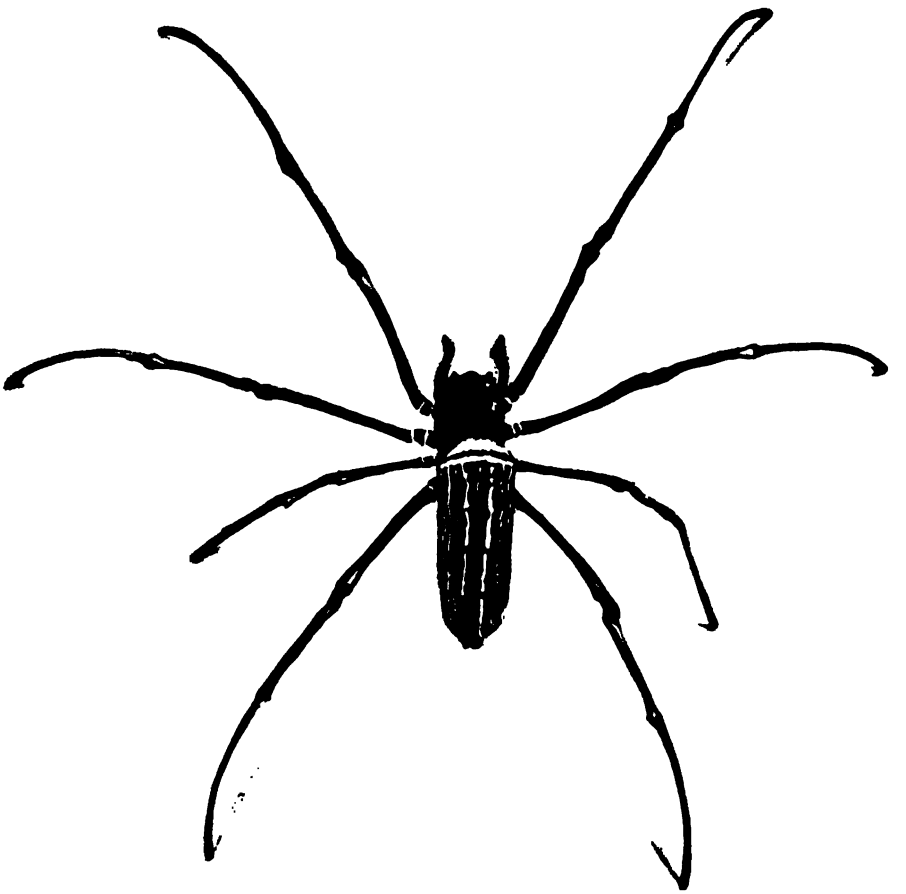
Among fish may specially be noted the "mamba" of the Baganda, the *Protopterus*, or lung-fish. This animal is very abundant in the waters of the Victoria Nyanza. To those to whom it is not a totem the flesh appears very succulent and nourishing, but the *Protopterus* is greatly dreaded by the fishermen. It has sharp teeth, which are really serrated ridges of bone, and with these it inflicts very severe bites. Moreover, it will take the offensive quite readily. Some of these mud-fish grow to

a length of five feet. Their habits are well described in Mr. Boulenger's book on "The Fishes of the Congo Basin." A list of the known fish of the Victoria Nyanza and of other parts of the Protectorate is given by this gentleman in an appendix. The fish of Uganda are almost identical with those of the tropical Nile, though of course not without close affinities to the fish of the Congo basin, inasmuch as only a few miles of forest separate the streams flowing to the Nile from the tributaries of the Congo.

The fresh-water crabs which are found in most of the lakes and rivers, even to the tiny mountain streams, all apparently belong to the same genus (*Telphusa*). Scorpions, *solifugæ*, spiders, and ticks are of course abundant, but as far as I know offer no species peculiar to the country. The *Nephila* spiders grow to a considerable size. If one of them were placed on a page of this book, its legs would extend to the extremities of the page. One of these (*Nephila lucasii*) weaves webs that must be a yard and a half in diameter. The silk of the web is a pale gold in colour, and gives a beautiful effect when the sun strikes it. This *Nephila* is illustrated by a coloured drawing done by Mr. Doggett. Another species of spider constructs cobwebs that are so dense as to be opaque. These spiders evidently live in colonies, and cover the bushes all round about with festoons of thick grey cobwebs so as to hide most of the leaves and branches. It is most disagreeable to stumble by accident into one of these spider colonies and emerge covered from head to foot with thick, clinging cobwebs that are strewn with the remains of the spiders' feasts. Ticks abound in the long grass, and constitute a perfect plague amongst domestic animals. I do not remember, however, having encountered or heard of that poisonous tick which is well known on the Zambezi, and whose bite is so venomous as to induce fever.

As regards insects, much of the bitter complaint which the author of this book wrote in his work on British Central Africa might be repeated in regard to Uganda. The butterflies—especially in the forested regions—are certainly remarkable for their beauty, and there are enormous moths exquisitely coloured in shades of pink and grey and lemon-white, and measuring perhaps six inches across the wings. But the caterpillars of these large moths—though equally beautiful objects, being covered with golden, amber, or orange plush half an inch in depth—are creatures which should not be incautiously handled, as these plush-like hairs can inflict a most painful sting, causing sometimes severe inflammation.

Among beetles there is the Goliath beetle of West Africa, whose coloration of blackish green and very pale pink makes him a striking object on the forest path.



W. G. D.

A *NEPHILA* SPIDER FROM TORO: HALF NATURAL SIZE.

The jigger, or burrowing flea, has reached Uganda from the west coast of Africa in its migration across the continent. Two or three years ago this pest was becoming very serious, as numbers of the natives were permanently lamed by its attacks on their feet, or even lost their lives from the mortification which followed jigger wounds. But, as in British Central Africa, the jigger has recently decreased in numbers, being apparently kept down by the heavy rainfall. Europeans who take reasonable care of themselves scarcely suffer to any extent from its attacks, and the natives are now becoming very adroit and careful in removing the jigger soon after this little female flea settles herself under the skin.

The greater part of the Protectorate has been visited yearly for some time past by ravaging flocks of locusts. These do not seriously damage the well-forested countries that are covered with rich vegetation, but they cause positive famines in the drier districts, where they eat up food crops. This locust, as already noted in the book, is the *Pachytylus migratorioides* of the Sahara Desert and Arabia. Increase of population and human settlement over the whole country is the only sure way of counteracting the attacks of these locusts, unless they are exterminated in their original home, the desert regions in the northern half of Africa.* If a country is densely populated, however, the noise made by the people distracts the locusts and drives them off. They may in this manner be skilfully driven towards the waters of some considerable lake, like one of the Nyanzas. When they attempt to fly across a large sheet of water, they nearly always fall from exhaustion after a few miles' journey, and are drowned in the waters of the lake. This fact has made such an impression on the natives of Uganda that the Albert Edward and Albert Nyanzas are each called the Killer of Locusts (Luta Nzige or Muta Nzige). Moreover, if steady protection is accorded to all the larger insect-eating birds, and to hawks, kites, storks, and cranes, a hundred agencies will exist by which quantities of these abominable insects may be devoured.

In all the country below 7,000 feet in altitude termites ("white ants") of several different genera are present, and the termite hill is one of the commonest objects in all Uganda landscapes. The extraordinary ant-hills which are raised in the Baringo and Rudolf Districts I have already illustrated. In many countries the surface of the prairie-land is dotted with innumerable mounds which are all raised by termites, and give the earth's skin the appearance of being pimpled.

Mantises and stick insects, cockroaches, and crickets are to the full as wonderful and repulsive in their developments as elsewhere in Africa. The stick insects may reach quite twelve inches in length, and their

* Where experiments, similar to those made in Natal, of inoculating captured insects with a fungoid disease, might well be tried.

252. A MANTIS INSECT

resemblance to stalks of grass is amazing. If they only had the sense not to move their legs, their presence would never be detected by man or bird. Several mantises are painted with beautiful pink eyes, like the *ocellus* in a peacock's tail, on the backs of their wings. One or two cockroaches develop wing-cases of mauve and yellow, but nevertheless have all the repulsiveness of their kind. Some of the crickets are enough to make a sensitive person swoon with horror at the sight of their enormous fat bellies and huge square heads.

Wild honey bees are presumably present throughout the Protectorate. There are many large solitary carpenter bees, one or two specimens of which produce really handsome insects. There is one very large bee of this "solitary" kind which is abundantly met with in the well-wooded regions of the Protectorate where there are plenty of flowers. This creature is nearly the size of the smallest bird, and its body is covered all over with golden plush. Wasps of many kinds are met with, but though they are armed with powerful stings they very seldom take the offensive. The mason wasp makes itself rather a nuisance if one lives in a house, because it is constantly making clay nests on the backs of one's books or wall ornaments and stuffing them with moribund grubs and caterpillars. In addition to this habit, the mason wasp, when he, or rather she, visits your dwelling, makes such a fidgety booming and buzzing that you are compelled to take notice of her proceedings and flick at her with napkins and handkerchiefs.

Ants, of course, are found in legions, except on the cold plateaux. There is the tiny kind which gets into one's sugar and biscuits; there is a fierce black ant in the forests and a red tree ant (both of which bite with great ferocity and attack one unprovoked); and there is one ant, a large one, living in twos and threes, which is worse than all the other ants put together, for it produces the most appalling stench, especially after rain has fallen. If by accident you tread on one of these ants and crush it, the smell which results is so skunk-like that you are obliged to avoid the locality where the deed has taken place for some hours unless you want

to be fairly sickened. The smell resembles that of foul drains or of a decaying corpse.

As regards the *Diptera*, the house-fly is a nuisance in all the cattle-keeping countries. There are gad-flies and horse-flies of large size which probe horse and man with their long probosces, draw blood, and cause violent irritation. There is another fly which, as in British Central Africa, inserts its eggs in the human skin, and these eggs duly produce grubs at the bottom of a terrific boil. If unattended to, the grub when he is sufficiently large emerges himself from the top of the boil and turns into a *pupa*. He is, however, generally squeezed out by the enraged European or native before he is ready to go.

Several kinds of mosquito are present, including two or more of the *Anopheles* genus. This, as my readers are now aware, is the kind of mosquito which transmits the germs of malarial fever either from the blood of persons infected or, as I sometimes think, from marsh water, mosquitoes being very fond of drinking. Midges and sand-flies are troublesome in some places, especially near forest and river banks, or on moist hillsides. One of these midges is rather large and has a black body. It draws a little bead of blood to the surface as it probes the skin. This abominable little pest is particularly characteristic of West Africa, but it is found in the District of Busoga and in the forested regions of Uganda and Toro. From the waters of Lake Victoria, as from those of Nyasa, rise up clouds of kungu flies, which are also a minute species of gnat. The kungu fly has a soft little body, scarcely as large as that of a flea, with gauzy wings. During the rainy season (generally) this gnat, which has been hatched in the broad waters of the lake, rises from the water in clouds of millions, one might almost say billions. Minute as the creature is, it leaves the waters of the lake in such numbers that its masses are mistaken, when seen from a distance, for veritable cloudlets. When the wind drives these creatures upon you, they will drift in through your house or tent until they cover floor, furniture, dinner, and documents with a thin layer of pale yellow insect atoms, not unlike the aphis in appearance. The natives of Uganda, as of Nyasaland, collect these flies by means of mat screens, brush them up, mash them up into cakes, fry them, and eat them with gusto. It is perhaps scarcely necessary to add that the natives of all parts of the Uganda Protectorate eat the flying termites ("white ants") with enjoyment.

Flies of the genera *Glossina* (a genus of which the tse-tse is a member) exist in the Uganda Protectorate. They have been caught there by Mr. Jackson and myself, not to mention many other collectors. But either the true tse-tse is absent from all parts of the Protectorate or it is unable to obtain there the germs of fever which it is the agent in introducing

to the blood of horses, cattle, and other beasts. This is a very fortunate circumstance, as it removes a serious hindrance in the way of rearing live-stock and developing transport.

Earth-worms not differing in appearance from those found in England are present in the soil of Uganda, but the worm class is most notably represented in the eyes of unscientific people by two remarkable forms—*Benhamia*, an earth-worm sometimes twelve inches in length, thick, and of a bright verditer-blue; and nematoid, or tape-worms. These last-named, as elsewhere in Africa, develop in the intestines of mammals, birds, and large insects, and may attain to a considerable length, perhaps two feet. In the Nile Province, especially, the tape or Guinea worm is much complained of by the natives, who take its germs into their intestines by drinking impure water. Small leeches are found in some of the marshes, but they are not as voracious as in tropical Asia.

It may be useful if at this stage in the book I say a few words on the subject of the shooting of big game within the limits of the Uganda Protectorate. The Foreign Office and the Administration of the Protectorate are becoming more and more averse to the mere shooting of wild beasts and birds for shooting's sake. The killing of beasts of prey or noxious reptiles remains without any restrictions except in regard to the rarer cats and the jackal. The chimpanzee and the colobus monkeys are partially protected; so are the rhinoceros, the zebra, and most of the antelopes; while the female or young elephant, the giraffe, the okapi (added subsequently), the mountain zebra, wild ass, gnu, eland, buffalo, Speke's tragelaph, and many of the rarer and more remarkable birds receive absolute protection, and can only be killed under special licence, which licence, it is to be presumed, would never be granted to mere trophy-hunters, but only to scientific collectors, sent out properly accredited to obtain a limited number of specimens for important museums which are public institutions.

It is hoped by the British Government that the maintenance of these restrictions on the needless killing of African wild creatures may result in their preservation from extinction at the hands of the European or the Negro. The measure instituted may even tend towards the marked increase within the game reserves of birds and beasts. Should their multiplication ever tend to the overcrowding of these reserves, it will be easy enough to thin them from time to time, and it is to be hoped that on these occasions efforts will be made to capture living specimens for exhibition in the zoological gardens of the world. Indeed, the sale of birds and beasts

under these conditions might be a not despicable item in the revenues of the Protectorate.

The more important clauses of the Game Regulations at present in force in the Uganda Protectorate are the following :—

Preservation of Game.

1. In these regulations :—

"Hunt, kill, or capture" means hunting, killing, or capturing by any method, and includes every attempt to kill or capture. "Hunting" includes molesting.

"Game" means any animal mentioned in any of the schedules.

"Public officer" means a European officer in the public service of the Uganda or East Africa Protectorates, or the superior establishment of the Uganda Railway.

"Native" means any native of Africa, not being of European or American race or parentage.

"Settler" means a person for the time being resident in the Protectorate not being a public officer or a native, and includes a trader.

"Sportsman" means a person who visits the Protectorate wholly or partly for sporting purposes, not being a public officer, or settler, or native.

"Collector" means the principal civil officer in charge of a district of the Protectorate.

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General Provisions.

2. No person, unless he is authorised by a special licence in that behalf, shall hunt, kill, or capture any of the animals mentioned in the first schedule.

3. No person, unless he is so authorised by a special licence under these regulations, shall hunt, kill, or capture any animal of the kinds mentioned in the second schedule if the animal be (*a*) immature, or (*b*) a female accompanied by its young.

4. No person, unless he is authorised under these regulations, shall hunt, kill, or capture any animal mentioned in the third schedule.

5. The Commissioner may, if he thinks fit, by Proclamation, declare that the name of any species, variety, or sex of animal (whether beast or bird), not mentioned in any schedule hereto, shall be added to a particular schedule, or that the name of any species or variety mentioned or included in one schedule shall be transferred to another schedule, and, if he thinks fit, apply such declaration to the whole of the Protectorate or restrict it to any district or districts in which he thinks it expedient that the animal should be protected.

6. No person shall within the Protectorate sell, or purchase, or offer or expose for sale, any ostrich eggs, or any head, horns, skin, feathers, or flesh of any animal mentioned in any of the schedules, unless such ostrich or animal shall have been kept in a domesticated state, and no such person shall knowingly store, pack, convey, or export any part of any animal which he has reason to believe has been killed or captured in contravention of these regulations.

7. If any person attempts to sell or otherwise transfer within the Protectorate, or to export from the Protectorate, any female elephant's tusk or any male elephant's tusk weighing less than 11 lbs., or any pieces of ivory which, in the opinion of the Court formed part of a female elephant's tusk or of a male elephant's tusk under 11 lbs. in weight, he shall be guilty of an offence against these regulations, and the tusks or parts of a tusk shall be confiscated by the authorities of the Protectorate.

8. No person shall use any poison, or, without a special licence, any dynamite or other explosive for the killing or taking of any fish.

9. Where it appears to the Commissioner that any method used for killing or capturing animals or fish is unduly destructive, he may, by Proclamation, prohibit such method or prescribe the conditions under which any method may be used, and if any person uses any method so prohibited, or uses any method otherwise than according to the conditions so prescribed, he shall be liable to the same penalties as for a breach of these regulations.

10. Save as provided by these regulations, or by any Proclamation under these regulations, any person may hunt, kill, or capture any animal not mentioned in any of the schedules, or any fish.

Game Reserves.

11. The area described in the fifth schedule hereto are hereby declared to be game reserves.

The Commissioner, with the approval of the Secretary of State, may, by Proclamation, declare any other portion of the Protectorate to be a game reserve, and may define or alter the limits of any game reserve, and these regulations shall apply to every such game reserve.

Save as provided in the regulations or by any such Proclamation, any person who, unless he is authorised by a special licence, hunts, kills, or captures any animal whatever in a game reserve, or is found within a game reserve under circumstances showing that he was unlawfully in pursuit of any animal, shall be guilty of a breach of these regulations.

Licences to Europeans, etc.

12. The following licences may be granted by the Commissioner, collector, or such person or persons as may be authorised by the Commissioner, that is to say :—

(1) A sportsman's licence ;
(2) A public officer's licence ; and
(3) A settler's licence.

The following fees shall be paid for licences, that is to say, for a sportsman's licence 750 rupees, and for a public officer's or a settler's licence 150 rupees.

Every licence shall be in force for one year only from the date of issue ; provided that a public officer's licence may be granted for a single period of fourteen consecutive days in one year on payment of a fee of 30 rupees.

Every licence shall bear in full the name of the person to whom it is granted, the date of issue, the period of its duration, and the signature of the Commissioner, collector, or other person authorised to grant licences.

The applicant for a licence may be required to give security by bond or deposit, not exceeding 2,000 rupees, for his compliance with these regulations, and with the additional conditions (if any) contained in his licence.

A licence is not transferable.

Every licence must be produced when called for by any officer of the Protectorate Government, or by any officer of the Uganda Railway specially authorised for the purpose in writing by the Commissioner.

In granting licences under these regulations a collector, or any person authorised to grant licences, shall observe any general or particular instructions of the Commissioner.

13. A sportsman's licence and a public officer's licence, respectively, authorise the holder to hunt, kill, or capture animals of any of the species mentioned in the third

schedule, but unless the licence otherwise provides, not more than the number of each species fixed by the second column of that schedule.

The holder of a sportsman's or public officer's licence granted under these regulations may, by the licence, be authorised to kill or capture additional animals of any such species on payment of such additional fees as may be prescribed by the Commissioner.

14. A settler's licence authorises the holder to hunt, kill, or capture animals of the species and to the number mentioned in the fourth schedule only.

15. A public officer's licence shall not be granted except to a public officer, and a settler's licence shall not be granted except to a settler; but a sportsman's licence may be granted to a settler.

16. When a licence similar to a public officer's licence under these regulations has been granted in the East Africa Protectorate, that licence shall authorise the holder to hunt, kill, or capture game in the Uganda Protectorate, in all respects as if the licence had been granted in the Uganda Protectorate, provided that such licence shall be first endorsed by a collector or other authorised officer of the Uganda Protectorate. Provided, also, that any authority to kill or capture additional animals, or any animals not permitted under the corresponding Uganda licence, shall be void.

17. Where it appears proper to the Commissioner for scientific or administrative reasons, he may grant a special licence to any person to kill or capture animals of any one or more species mentioned in any of the schedules, or to kill, hunt, or capture, in a game reserve specified, beasts or birds of prey, or other animals whose presence is detrimental to the purposes of the game reserve, or, in particular cases, to kill or capture, as the case may be, in a game reserve, an animal or animals of any one or more species mentioned in the schedules.

A special licence shall be subject to such conditions as to fees and security (if any), number, sex, and age of specimens, district and season for hunting, and other matters as the Commissioner may prescribe, and in the Uganda Railway zone, whether included in a game reserve or not, it shall be lawful to kill or capture any beast of prey.

Where the collector, or assistant collector, or other European officer of the Protectorate Government, in a district comprising a game reserve, is the holder of a public officer's licence, the Commissioner may grant a special licence authorising the officer to hunt, kill, or capture, in the game reserve, such animals as may be allowed by his public officer's licence.

Save as aforesaid, the holder of a special licence shall be subject to the general provisions of these regulations, and to the provisions relating to holders of licences.

18. Every licence-holder shall keep a register of the animals killed or captured by him in the form specified in the seventh schedule.

The register shall be submitted as often as convenient, but not less frequently than once in three months, to the nearest collector or assistant collector, who shall countersign the entries up to date.

Any person authorised to grant licences may at any time call upon any licence-holder to produce his register for inspection.

Every person holding a sportsman's licence shall likewise before leaving the Protectorate submit his register to the Deputy Commissioner.

If any holder of a licence fails to keep his register truly, he shall be guilty of an offence against these regulations.

19. The Commissioner may revoke any licence when he is satisfied that the holder has been guilty of a breach of these regulations, or of his licence, or has connived

with any other person in any such breach, or that in any matters in relation thereto he has acted otherwise than in good faith.

20. The Commissioner may at his discretion direct that a licence under these regulations shall be refused to any applicant.

21. Any person whose licence has been lost or destroyed may obtain a fresh licence for the remainder of his term on payment of a fee not exceeding one-fifth of the fee paid for the licence so lost or destroyed.

22. Any licence granted under these regulations does not entitle the holder to hunt, kill, or capture any animal, or to trespass upon private property without the consent of the owner or occupier.

23. Any person who, after having killed or captured animals to the number and of the species authorised by his licence, proceeds to hunt, kill, or capture any animals which he is not authorised to kill or capture, shall be guilty of a breach of these regulations and punishable accordingly.

24. Persons in the employment of holders of licences may, without licence, assist such holders of licences in hunting animals, but shall not use firearms.

The holder of a sportsman's or public officer's licence while engaged in hunting animals mentioned in the schedules shall not be accompanied by more than one person provided with a settler's or native's licence.

In any case of a breach of this Regulation, the licence of every licence-holder concerned in the breach shall be liable to forfeiture, and such licence-holder shall be guilty of an offence.

25. The Commissioner, or any person authorised by him in that behalf, may at his discretion require any person importing firearms or ammunition that may be used by such person for the purposes of killing game or other animals to take out a settler's licence under these regulations, and may refuse to allow the firearms or ammunition to be taken from the public warehouse until such licence is taken out. Save as aforesaid, nothing in these regulations shall affect the regulations of the Uganda Firearms Regulations, 1896.

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Legal Procedure.

28. Where any public officer of the East Africa Protectorate thinks it expedient for the purposes of verifying the register of a licence-holder, or suspects that any person has been guilty of a breach of these regulations, he may inspect and search, or authorise any subordinate officer to inspect and search, any baggage, packages, waggons, tents, building, or caravan belonging to or under the control of such person, or his agent, and if the officer finds any heads, tusks, skins, or other remains of animals appearing to have been killed, or any live animals appearing to have been captured, in contravention of these regulations, he shall seize and take the same before a magistrate to be dealt with according to law.

29. Any person who hunts, kills, or captures any animal in contravention of these regulations, or otherwise commits any breach of these regulations, shall, on conviction, be liable to a fine which which may extend to 1,000 rupees, and, where the offence relates to more animals than two, to a fine in respect of each animal which may extend to 500 rupees, and in either case to imprisonment which may extend to two months, with or without a fine.

In all cases of conviction, any heads, horns, tusks, skins, or other remains of animals found in the possession of the offender, or his agent, and all live animals captured in contravention of these regulations, shall be liable to forfeiture.

If the person convicted is the holder of a licence, his licence may be revoked by the Court.

30. Where in any proceeding under these regulations any fine is imposed, the Court may award any sum or sums not exceeding half the total fine to any informer or informers.

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SCHEDULES.*

First Schedule.

Animals not to be hunted, killed, or captured by any person, except under Special Licence.

1. Okapi.
2. Giraffe.
3. Mountain or Grevy's Zebra.
4. Wild Ass.
5. White-bearded, brindled, or any other species of Gnu (*Connochætes*).
6. Eland (*Taurotragus*).
7. Buffalo.
8. Speke's Tragelaph (*Limnotragus spekei*).
9. Elephant (female or young).
10. Ostrich (female or young).
11. Secretary-bird.
12. Vulture (any species).
13. Owls (any species).
14. Whale-headed Stork (*Balæniceps rex*).
15. Saddle-billed Stork (*Ephippiorhyncus senegalensis*).
16. Crowned Crane (*Balearica*).
17. Marabou Stork (*Leptoptilus*).
18. Egrets or White Herons.

Second Schedule.

Animals, the females of which are not to be hunted, killed, or captured when accompanied by their young, and the young of which are not to be hunted, killed, or captured, except under Special Licence.

1. Rhinoceros.
2. Zebra (other than the Mountain Zebra).
3. Chevrotain (*Dorcatherium*).
4. All Antelopes or Gazelles not mentioned in the first schedule.

* These schedules may contain the names of some species or varieties not found, or only occasionally found, in Uganda.

THIRD SCHEDULE.

Animals, limited numbers of which may be killed or captured under a Sportsman's or Public Officer's Licence.

Kind.	Number allowed.
1. Elephant (male)	2
2. Rhinoceros	2
3. Hippopotamus	10
4. Zebras (other than the Mountain Zebra)	2
5. Antelopes and Gazelles—	
Class A—	
Oryx (Gemsbuck or Beisa)	2
Hippotragus (Sable or Roan)	2
Strepsiceros (Kudu)	2
6. Colobi and other fur-Monkeys	2
7. Aard Varks (*Orycteropus*)	2
8. Serval	10
9. Cheetah (*Cynælurus*)	2
10. Aard Wolf (*Proteles*)	2
11. Smaller Monkeys, of each species	2
12. Ostrich (male only)	2
13. Antelopes and Gazelles—	
Class B—	
Any species other than those in Class A	10
14. Chevrotains (*Dorcatherium*)	10
15. Wild Pig, of each species	10
16. Smaller Cats	10
17. Jackal	10
18. Chimpanzee	1

FOURTH SCHEDULE.

Animals, limited numbers of which may be killed or captured under a Settler's Licence.

Kind.	Number of Animals allowed.
1. Hippopotamus	10
2. (i.) Wart-hog (*Phacochærus*)	10
(ii.) Bush-pig (*Potamo chœrus chœropotamus*)	10
(iii.) Senaar Swine (*Sus senaarensis*)	10
3. The following Antelopes and Gazelles only :—	
(i.) Grant's Gazelle	5 animals in all in any calendar month, made up of animals of a single species or of several.
(ii.) Thomson's Gazelle	
(iii.) Hartebeest (*Bubalis* and *Damaliscus*)	
(iv.) Impala (*Æpyceros*)	
(v.) Reedbuck (*Cervicapra*)	
(vi.) Duiker (*Cephalophus*)	
(vii.) Klipspringer (*Oreotragus*)	
(viii.) Steinbuck (*Raphiceros*)	
(ix.) Waterbuck (*Cobus*)	
(x.) Bushbuck (*Tragelaphus*)	
4. Serval and smaller cats; jackal: of each kind	10

LISTS OF

THE FAUNA

KNOWN TO EXIST IN THE TERRITORIES FORMING THE UGANDA PROTECTORATE.

BY OFFICIALS OF THE BRITISH MUSEUM (NATURAL HISTORY),
UNDER THE DIRECTION OF PROFESSOR E. RAY LANKESTER, F.R.S.,
WITH A FEW SUPPLEMENTARY NOTES BY SIR HARRY JOHNSTON.

LIST OF THE

MAMMALS KNOWN TO OCCUR IN THE UGANDA PROTECTORATE

BY OLDFIELD THOMAS

THE following list, compiled at the request of Sir Harry Johnston, makes no pretence at being a critical or exhaustive one, as the mammals of Uganda have been neither collected nor worked out enough to make such a list practicable. The names here given are those of the species obtained and presented to the British Museum by Sir Harry himself, by Mr. F. J. Jackson, whose valuable collections have added so immensely to our knowledge of the East African fauna, by Dr. Donaldson Smith, Mr. G. F. Scott-Elliot, Dr. W. J. Ansorge, and others, supplemented by the names of those recorded by Mr. Oscar Neumann, Dr. Matschie, and other writers on the subject. But it must be repeated that the list is necessarily very incomplete, especially as such knowledge as we do possess of the mammals of our East African possessions is largely based on collections made just outside the area now treated of, so that the greater part of the specimens obtained by Mr. Jackson, and those of Lord Delamere, Messrs. C. S. Betton, S. L. Hinde, H. J. Mackinder, A. B. Percival, and others do not come into the count.

PRIMATES.

	Authority.
Homo sapiens æthiops (Hamites; Pygmy, Bantu, Nilotic, and Masai Negroes)	
Anthropopithecus troglodytes schweinfurthi, Gigl.	Johnston, Neumann.
Papio doguera, Puch.	Smith, Johnston, Neumann.
Cercocebus aterrimus, Oud.	Neumann, Johnston.
Colobus matschiei, Neum.	Johnston, Neumann.
C. abyssinicus poliurus, Thos.	Donaldson Smith.
C. ruwenzorii, Thos.	Johnston.
C. rufomitratus, Pet.	Johnston.
Cercopithecus rufoviridis centralis, Neum.	Johnston, Neumann.
C. schmidti, Matsch.	Matschie, Jackson, Johnston.
C. stuhlmanni, Matsch.	Matschie, Scott Elliot, Johnston.
C. bourtoulini, Gigl.	Donaldson Smith.
C. neglectus, Schleg.	Smith, Neumann.
C. otoleucus	Delmé Radcliffe.
Galago demidoffi, Fisch.	Johnston.
[*Periodicticus potto*]	Whyte, Johnston.

CHEIROPTERA.

Epomophorus schoensis, Rüpp.	Johnston.
E. minor, Dobs.	Jackson, Ansorge.
E. pusillus, Pet.	Newmann.

	Authority.
Rousettus stramineus, Geoff.	
R. collaris, Ill.	
Rhinolophus hildebrandti, Pet.	Jackson.
Hipposiderus caffer, Cuv.	Jackson, Johnston, Betton.
Megaderma frons, L.	Johnston, Neumann.
Nycteris hispida, Schieb.	Neumann.
N. thebaica, Geoff.	Ansorge.
Pipistullus nanus, Pet.	Elliot, Ansorge.
P. kuhlii fuscatus, Thos.	Johnston.
Glauconycteris variegatus, Tomes	Jackson
Scotophilus nigrita, Schr.	Jackson.
Vespertilio tenuipinnis, Pet.	Jackson.
Taphozous mauritianus, Geoff.	Elliot, Ansorge.
Nyctinomus lobatus, Thos.	Jackson.
INSECTIVORA.	
Rhynchocyon stuhlmanni, Matsch.	Stuhlmann.
Macroscelides pulcher, Thos.	Delamere, Johnston.
Crocidura hedenborgi, Sund.	Jackson.
C. doriana, Dobs.	Ansorge.
Chrysochloris stuhlmanni, Matsch.	Stuhlmann.
Erinaceus albiventus, Wagn.	Johnston, Neumann.
CARNIVORA.	
Felis leo, Linn.	Johnston.
F. pardus, Linn.	Johnston.
F. serval, Schieb.	Neumann, Johnston.
F. servalina, Og.	Neumann, Johnston.
F. caligata, Temm.	Neumann.
F. caffra	Johnston.
Cynælurus guttatus, Herm.	Johnston.
Proteles cristatus	Johnston, Doggett.
Hyæna circuta, Erxl.	Johnston.
Viverra civetta, L.	Johnston.
Genetta victoriæ, Thos.	Johnston.
G. purdina, Geoff.	Neumann.
Nandinia binotata, Gray	Johnston, Neumann.
Herpestes caffer, Gm.	Jackson, Johnston, Neumann.
H. gracilis, Rüpp.	Neumann.
H. galera, Erxl.	Jackson.
H. albicanda, Cuv.	Johnston, Neumann.
Helogale undulata, Pet.	Rev. F. C. Smith, Neumann.
Canis adustus, Sund.	Jackson, Johnston, Neumann.
C. mesomelas, Schr.	Betton.
[*C. simensis?*]	Johnston.
Otocyon megalotis, Desm.	Betton.
Lycaon pictus, Temm.	Betton.
Lutra capensis, Schinz.	Neumann.
L. maculicollis, Licht.	Neumann.
[*Pœcilogale albinucha*]	Johnston.
[*Mellivora ratel*]	Johnston.

RODENTIA.

	Authority.
Anomalurus jacksoni, De Wint.	Jackson, Neumann.
Sciurus calliurus, Buchh.	Jackson.
S. multicolor, Rüpp.	Emin, Donaldson Smith, Neumann.
S. rufobrachiatus, Waterh.	Jackson, Scott-Elliot.
Funisciurus böhmi, Reichen.	Jackson, Ansorge, Neumann.
F. jacksoni, De Wint.	Jackson.
F. ochraceus, Huet.	
Xerus erythropus, Geoff.	Ansorge.
X. rutilus, Critzschm.	Ansorge, Neumann.
Graphiurus murinus, Desm.	Jackson.
G. parvus, True.	Jackson.
G. smithii, Thos.	Rev. F. C. Smith.
Cricetomys gambianus, Waterh.	Johnston.
Gerbillus (*Tatua*) sp.	Neumann.
Otomys jacksoni, Thos.	Jackson.
Dendromys sp.	Ansorge, Johnston, Neumann.
Arvicanthis abyssinicus, Rüpp.	Jackson, Johnston, Neumann.
A. massaicus, Pagenst.	Jackson, Ansorge.
A. pumilio diminutus, Thos.	Jackson.
Mus hypoxanthus, Puch.	Jackson, Ansorge.
M. arborarius, Pet.	Johnston.
M. ugandæ, De Wint.	Jackson, Ansorge, Neumann.
M. jacksoni, De Wint.	Jackson.
M. hildebrandti, Pet.	Ansorge.
Leggada minutrides, Smith	Johnston, Neumann.
L. musculoides, Temm.	Ansorge.
Dasymys bentleyæ, Thos.	Jackson.
Lophuromys ansorgei, De Wint.	Ansorge.
L. flavopunctatus, Thos.	Jackson, Ansorge.
Lophiomys smithii, Rhoads	Jackson.
Tachyoryctis splendens ibeanus, Thos.	Ansorge, Neumann.
Pedetes caffer, Pall.	Johnston, Neumann.
Thryonomys swinderenianus, Temm.	Donaldson Smith.
T. gregorianus, Thos.	Jackson.
Hystrix galeata, Thos.	Johnston.
[*Lepus*, sp. inc.]	Johnston.*

UNGULATA.

Elephas africanus, Blum.	
Diceros bicornis, Linn.	
Equus burcheili böhmi, Matsch.	Johnston, Neumann.
Procavia jacksoni, Thos.	Jackson.
P. brucei, Gray	Neumann.
P. crawshayi, Thos.	Johnston.
P. marmota, Thos.	Johnston.
Hippopotamus amphibius, Linn.	

* Hares of perhaps three species are common throughout Uganda, but no specimens have yet been identified.—H. H. J.

	Authority.
Phacochœrus æthiopicus, Sund.	Johnston.
[*Potamochœrus chœropotamus*]	Johnston.
[*P. penicillatus*]	Johnston.
Giraffa camelopardalis, Linn.	Johnston, Neumann.
Okapia johnstoni, Sclat.	Johnston.
Bubalis æquinoctialis, Blyth (*centralis*, Gray)	Neumann.
Bubalis jacksoni, Thos.	Jackson, Johnston, Neumann.
B. cokei, Günth.	Johnston.
Damaliscus jimela, Matsch.	Jackson, Neumann.
D. tiang, Hengl.	Johnston.
Cephalophus johnstoni, Thos.	Johnston.
C. rubidus, Thos.	Johnston.
C. æquatorialis, Matsch.	Scott-Elliot, Jackson, Johnston.
C. grimmii, Linn.	Jackson, Johnston.
C. abyssinicus, Rüpp.	Neumann.
Oreotragus oreotragus, Zimm.	
Ourebia montana, Rüpp.	Jackson, Johnston.
O. haggardi, Thos.	Donaldson Smith.
Raphiceros neumanni, Matsch.	Jackson, Johnston.
Madoqua kirkii, Günth.	Jackson, Neumann.
Cobus defassa, Rüpp.	Jackson, Johnston, Neumann.
C. thomasi, Scl.	Lugard, Scott-Elliot, Jackson, Johnston.
C. leucotis	Delmé Radcliffe, E. N. Buxton.
Cervicapra arundinum, Bodd.	Neumann.
C. redunca wardi, Thos.	Jackson, Johnston.
C. fulvorufula chanleri, Rothsch.	Donaldson Smith.
Oryx beisa	Harold Baker, Doggett (Baringo).
Hippotragus equinus	Johnston.
H. bakeri	Johnston, Delmé Radcliffe.
Æpyceros melampus, Licht.	Lugard, Jackson, Johnston.
Gazella grantii, Brooke	Jackson, Johnston, Betton.
G. grantii notata, Thos.	A. H. Neumann, Ferguson.
G. grantii brightii, Thos.	Bright, Ferguson, Donaldson Smith.
G. thomsoni, Günth.	Jackson, Neumann.
Tragelaphus decula, Rüpp.	Neumann.
T. scriptus, Pall.	Neumann.
T. scriptus bor, Hengl.	Donaldson Smith.
T. euryceros	F. W. Isaac.
Limnotragus spekei, Scl.	Speke, Jackson, Johnston, Neumann.
Taurotragus oryx livingstonei, Scl.	Jackson.
Strepsiceros kudu	Doggett, Johnston.
[*Bos caffer*]	Johnston, Jackson.
[*Bos pumilus*]	Johnston
[*Bos æquinoctialis*]	Johnston

EDENTATA.

Manis tricuspis, Raf.	Jackson, Johnston.
Orycteropus afer, Pall.	Johnston.

A TENTATIVE LIST OF THE

BIRDS OF THE UGANDA PROTECTORATE.

BY CHARLES CHUBB.

ORDER I. STRUTHIONIFORMES.

FAMILY STRUTHIONIDÆ.

1. *Struthio massaicus*, Neum.
2. *S. camelus*, Linn. [The North African ostrich extends southward to Karamojo and even to near Baringo, judging from two live specimens seen by me in the possession of an Arab caravan, and one killed by Doggett near Baringo.—H. H. J.]

ORDER II. GALLIFORMES.

Sub-order Phasiani.

FAMILY PHASIANIDÆ.

3. *Francolinus hubbardi*, Grant.
4. *F. streptophorus*, Grant.
5. *F. granti*, Hartl.
6. *F. kikuyuensis*, Grant.
7. *F. elgonensis*, Grant.
8. *F. clappertoni*, Childr.
9. *F. gedgei*, Grant.
10. *F. icterorhynchus*, Heugl.
11. *F. hildebrandti*, Cab.
12. *F. schuetti*, Cab.
13. *F. jacksoni*, Grant.
14. *Pternistes cranchi* (Leach).
15. *P. rufopictus*, Reichen.
16. *Coturnix coturnix* (Linn.).
17. *C. delegorguei*, Deleg.
18. *Excalfactoria adansoni* (Verr.).
19. *Ptilopachys fuscus* (Vieill.).
20. *P. florenciæ*, Grant.

FAMILY NUMIDIDÆ.

21. *Numida reichenowi*, Grant.
22. *N. ansorgei*, Hartert.
23. *N. intermedia*, Neum.
24. *N. ptilorhyncha*, Licht.
25. *Guttera pucherani* (Hartl.).

ORDER III. HEMIPODII.

Family Turnicidæ.

26. *Turnix lepurana* (Smith).

ORDER IV. PTEROCLIDIDIFORMES.

Family Pteroclididæ.

27. *Pteroclidurus exustus* (Temm.).
28. *Pteroclis lichtensteini*, Temm.
29. *P. quadricinctus*, Temm.

ORDER V. COLUMBIFORMES.

Family Treronidæ.

30. *Vinago waalia* (Gm.).
31. *V. nudirostris*, Swains.

Family Columbidæ.

32. *Columba guinea*, Linn.
33. *C. longirostris*, Reichen.
34. *C. arquatrix*, Temm.
35. *Turturœna sharpei*, Salvad.

Family Peristeridæ.

36. *Turtur lugens* (Rüpp.).
37. *Streptopelia semitorquata* (Rüpp.).
38. *S. damarensis* (Finsch & Hartl.).
39. *S. ambigua* (Bocage).
40. *Stigmatopelia senegalensis* (Linn.).
41. *Œna capensis* (Linn.).
42. *Tympanistria tympanistria* (Temm. & Knip.).
43. *Chalcopelia afra* (Linn.).

ORDER VII. RALLIFORMES.

Family Rallidæ.

44. *Crecopsis egregia* (Peters).
45. *Crex crex* (Linn.).
46. *Limnocorax nigra* (Gm.).
47. *Zapornia parva* (Scop.).
48. *Sarothrura pulchra* (J. E. Gray).
49. *Gallinula chloropus* (Linn.).
50. *Porphyriola alleni* (Thomps.).
51. *Porphyrio porphyrio* (Linn.).
52. *Fulica cristata*, Gm.

ORDER VIII. PODICEPEDIDIFORMES.

Family Podicipedidæ.

53. *Lophæthyia cristata* (Linn.).
54. *Podicipes capensis*, Salvad.

ORDER XIV. LARIFORMES.

Family Laridæ.

55. *Hydrochelidon leucoptera* (Meisn. & Schinz).
56. *H. nigra* (Linn.).
57. *Gelochelidon anglica* (Mont.).
58. *Rhynchops flavirostris*, Vieill.
59. *Larus fuscus*, Linn.
60. *L. cirrhocephalus*, Vieill.

ORDER XV. CHARADRIIFORMES.

Family Charadriidæ.

61. *Defilippia crassirostris* (De Fil.).
62. *Lobivanellus senegallus* (Linn.).
63. *L. lateralis* (Smith).
64. *Hoplopterus spinosus* (Linn.).
65. *Stephanibyx coronata* (Bodd.).
66. *S. inornatus* (Swains.).
67. *Ochthodromus asiaticus* (Pall.).
68. *Oxyechus tricollaris* (Vieill.).
69. *Ægialitis hiaticola* (Linn.).
70. *Æ. dubia* (Scop.).
71. *Æ. venusta* (Fisch. & Reichen.).
72. *Æ. varia* (Vieill.).
73. *Himantopus himantopus* (Linn.).
74. *Totanus stagnatilis*, Bechst.
75. *Helodromas ochropus* (Linn.).
76. *Tringoides hypoleucus* (Linn.).
77. *Glottis nebularius* (Gunn.).
78. *Rhyacophilus glareola* (Gm.).
79. *Pavoncella pugnax* (Linn.).
80. *Calidris arenaria* (Linn.).
81. *Limonites minuta* (Leisl.).
82. *Ancylochilus subarquatus* (Güld.).
83. *Gallinago major* (Gm.).
84. *G. nigripennis*, Bp.
85. *Rostratula capensis* (Linn.).

Family Parridæ.

86. *Actophilus africanus* (Gm.).
87. *Microparra capensis* (Smith).

Family Cursoriidæ.

88. *Ortyxelus meiffreni*, Vieill.
89. *Pluvianus ægyptius* (Linn.).

Family Glareolidæ.

90. *Glareola pratincola* (Linn.).
91. *Galactochrysea emini* (Shelley).
92. *G. nuchalis* (Gray).

Family Œdicnemidæ.

93. *Œdicnemus senegalensis*, Swains.
94. *Œ. vermiculatus*, Cab.
95. *Œ. capensis*, Licht.
96. *Œ. affinis*, Rüpp.

Family Otididæ.

97. *Lissotis lovati*, Grant.
98. *L. hartlaubi* (Heugl.).
99. *Trachelotis canicollis* (Reichen.).

ORDER XVIII. ARDEIFORMES.

Family Ibididæ.

100. *Ibis æthiopica* (Lath.).
101. *Hagadashia hagidash* (Lath.).
102. *Plegadis falcinellus* (Linn.).

Family Plataleidæ.

103. *Platalea minor*, Temm. & Schl.

Family Ciconiidæ.

104. *Pseudotantalus ibis* (Linn.).
105. *Abdimia abdimi* (Licht.).
106. *Dissoüra episcopus* (Bodd.).
107. *Ciconia ciconia* (Linn.).
108. *Anastomus lamelligerus*, Temm.
109. *Ephippiorhynchus senegalensis* (Shaw).
110. *Leptoptilus crumeniferus* (Less.).

Family Scopidæ.

111. *Scopus umbretta*, Gm.

Family Balænicipitidæ.

112. *Balæniceps rex*, Gould.

FAMILY ARDEIDÆ.

113. *Pyrrherodias purpurea* (Linn.).
114. *Ardea goliath*, Cretzschm.
115. *A. melanocephala*, Vig. & Childr.
116. *Mesophoyx brachyrhyncha* (Brehm).
117. *Herodias alba* (Linn.).
118. *Melanophoyx ardesiaca* (Wagl.).
119. *Garzetta garzetta* (Linn.).
120. *Butorides atricapilla* (Afzel.).
121. *Erythrocnus rufiventris* (Sundev.).
122. *Bubulcus lucidus* (Rafin.).
123. *Ardeola ralloides* (Scop.).
124. *Ardetta payesi* (Hartl.).
125. *Ardeirallus sturmi* (Wagl.).

ORDER XIX. PHŒNICOPTERIFORMES.

FAMILY PHŒNICOPTERIDÆ.

126. *Phœnicopterus roseus*, Pall.
127. *Phœniconais minor* (Geoffr.).

ORDER XXI. ANSERIFORMES.

FAMILY ANATIDÆ.

128. *Plectropterus gambensis* (Linn.).
129. *Sarcidiornis melanonota* (Penn.).
130. *Nettopus auritus* (Bodd.).
131. *Cyanochen cyanopterus* (Rüpp.).
132. *Dendrocygna vidua* (Linn.).
133. *D. fulva* (Gm.).
134. *Alopochen ægyptiacus* (Linn.).
135. *Anas undulata*, Dubois.
136. *Nettium punctatum* (Burch.).
137. *N. capense* (Gm.).
138. *Pœcilonetta erythrorhyncha* (Gm.).
139. *Erismatura maccoa* (Smith).

ORDER XXIV. PELECANIFORMES.

FAMILY PHALACROCORACIDÆ.

140. *Phalacrocorax lucidus* (Licht.).
141. *P. lugubris*, Reichen.
142. *P. africanus* (Gm.).

FAMILY PLOTIDÆ.

143. *Plotus rufus*, Dand.

FAMILY PELICANIDÆ.

144. *Pelecanus rufescens*, Gm.

ORDER XXVI. ACCIPITRIFORMES.

Family Serpentariidæ.

145. *Serpentarius serpentarius* (Müll.).

Family Vulturidæ.

146. *Pseudogyps africanus* (Salvad.).
147. *Lophogyps occipitalis* (Burch.).
148. *Neophron percnopterus* (Linn.).
149. *Necrosyrtes monachus* (Temm.).

Family Falconidæ.

150. *Polyboroides typicus*, Smith.
151. *Circus pygargus* (Linn.).
152. *C. æruginosus* (Linn.).
153. *Melierax polyzonus* (Rüpp.).
154. *M. gabar* (Dand.).
155. *M. niger* (Vieill.).
156. *Astur tachiro* (Dand.).
157. *A. unduliventer* (Rüpp.).
158. *A. sphenurus* (Rüpp.).
159. *A. polyzonoides* (Smith).
160. *Accipiter melanoleucus*, Smith.
161. *Buteo augur*, Rüpp.
162. *B. auguralis*, Salvad.
163. *B. desertorum* (Dand.).
164. *Aquila rapax* (Temm.).
165. *A. wahlbergi*, Sundev.
166. *Eutalmaëtus spilogasta* (Bp.).
167. *Spizaëtus coronatus* (Linn.).
168. *Lophoaëtus occipitalis* (Dand.).
169. *Asturinula monogrammica* (Temm.).
170. *Circaëtus cinerascens*, Müll.
171. *C. cinereus*, Vieill.
172. *Butastur rufipennis* (Sundev.).
173. *Helotarsus ecaudatus* (Dand.).
174. *Haliaëtus vocifer* (Dand.).
175. *Milvus ægyptius* (Gm.).
176. *M. korschun* (Gm.).
177. *Elanus cæruleus* (Desp.).
178. *Machærhamphus anderssoni* (Gurney).
179. *Baza emini*, Reichen.
180. *Poliohierax semitorquatus* (Smith).
181. *Falco tanypterus*, Schl.
182. *F. subbuteo*, Linn.
183. *F. cuvieri*, Smith.
184. *F. ruficollis*, Swains.
185. *Cerchneis tinnunculus* (Linn.).
186. *C. alopex* (Heugl.).
187. *C. naumanni* (Fleisch).
188. *Dissodectes ardesiacus* (Bonn. & Vieill.).

ORDER XXVIII. PSITTACIFORMES.

Family Psittacidæ.

189. *Pœocephalus massaicus*, Fischer & Reichen.
190. *P. meyeri*, Cretzsch.
191. *P. saturatus*, Sharpe.
192. *Psittacus erithacus*, Linn.
193. *Palæornis docilis* (Vieill.).
194. *Agapornis pullaria* (Linn.).
195. *A. fischeri*, Reichen.
196. *A. personata*, Reichen.

ORDER XXVII. STRIGIFORMES.

Family Bubonidæ.

197. *Asio nisuella* (Dand.).
198. *Bubo maculosus* (Vieill.).
199. *B. cinerascens*, Guér.
200. *B. lacteus* (Temm.).
201. *Scops capensis*, Smith.
202. *S. ugandæ* (Neum.).
203. *S. leucotis* (Temm.).
204. *Syrnium nuchale*, Sharpe.
205. *Glaucidium perlatum* (Vieill.).
206. *G. castaneum* (Reichen.).
207. *Strix maculata*, Brehm.

ORDER XXIX. CORACIIFORMES.

Family Coraciidæ.

208. *Coracias abyssinicus*, Bodd.
209. *C. nævius*, Dand.
210. *Eurystomus rufobuccalis*, Reichen.

Family Alcedinidæ.

211. *Ceryle rudis* (Linn.).
212. *C. sharpei*, Gould.
213. *Corythornis cyanostigma* (Rüpp.).
214. *Ispidina pista* (Bodd.).
215. *Halcyon senegalensis* (Linn.).
216. *H. cyanoleucus* (Vieill.).
217. *H. semicœruleus* (Forsk.).
218. *H. chelicutensis* (Stanl.).

Family Bucerotidæ.

219. *Bucorax caffer*, Bocage.
220. *Ceratogymna atrata* (Temm.).
221. *Lophoceros fasciata* (Shaw).

222. *Lophoceros nasutus* (Linn.).
223. *L. epirhinus* (Sundev.).
224. *L. erythrorhynchus* (Temm.).
225. *L. melanoleucus* (Licht.).
226. *L. jacksoni*, Grant.
227. *Bycanistes subquadratus*, Cab.

FAMILY UPUPIDÆ.

228. *Upupa epops*, Linn.
229. *U. africana*, Bechst.

FAMILY IRRISORIDÆ.

230. *Irrisor erythrorhynchus* (Lath.).
231. *I. jacksoni*, Sharpe.
232. *Scoptelus notatus*, Salvin.
233. *Rhinopomastus cabanisi* (De Fil.).

FAMILY MEROPIDÆ.

234. *Melittophagus cyanostictus*, Cab.
235. *M. variegatus* (Vieill.).
236. *M. oreobates*, Sharpe.
237. *M. frœnatus* (Hartl.).
238. *Merops apiaster* Linn.
239. *M. persicus*, Pall
240. *M. superciliosus*, Linn.
241. *M. nubicus*, Gm.
242. *M. albicollis*, Vieill.

FAMILY CAPRIMULGIDÆ.

243. *Scotornis climacurus* (Vieill.).
244. *Cosmetornis vexillarius* (Gould).
245. *Caprimulgus fossei*, Hartl.
246. *C. clarus*, Reichen.
247. *C. inornatus*, Heugl.
248. *C. poliocephalus*, Rüpp.
249. *C. europæus*, Linn.
250. *C. donaldsoni*, Sharpe.

FAMILY CYPSELIDÆ.

251. *Cypselus æquatorialis* (Müll.).
252. *C. niansæ* (Reichen.).
253. *C. shelleyi*, Salvad.
254. *C. streubeli* (Hartl.).
255. *C. affinis* (J. E. Gray).
256. *Tachornis parvus* (Licht.).

FAMILY COLIIDÆ

257. *Colius leucotis*, Rüpp.
258. *C. berlepschi*, Hartert.
259. *C. affinis*, Shelley.

FAMILY TROGONIDÆ.

260 *Hapaloderma narina* (Steph.).
261. *Heterotrogon vittatum* (Shelley).

ORDER XXX. COCCYGES.

FAMILY MUSOPHAGIDÆ.

262. *Turacus leucolophus*, Heugl.
263. *T. hartlaubi* (Fischer & Reichen).
264. *Gallirex johnstoni*, Sharpe.
265. *Musophaga rossæ*, Gould.
266. *Corythæola cristata* (Vieill.).
267. *Schizorhis leucogaster*, Rüpp.
268. *S. zonura*, Rüpp.
269. *Gymnoschizorhis leopoldi* (Shelley).

FAMILY CUCULIDÆ.

270. *Coccystes glandarius* (Linn.).
271. *C. jacobinus* (Bodd.).
272. *C. caffer* (Licht.).
273. *Pachycoccyx validus* (Reichen.).
274. *Cuculus gularis*, Steph.
275. *C. canorus*, Linn.
276. *C. heuglini*, Cab.
277. *C. solitarius*, Steph.
278. *C. gabonensis*, Lafr.
279. *C. clamosus*, Lath.
280. *Metallococcyx smaragdineus* (Swains.).
281. *Chrysococcyx klaasi* (Steph.).
282. *C. cupreus* (Bodd.).
283. *Centropus fischeri*, Reichen.
284. *C. monachus*, Rüpp.
285. *C. superciliosus*, Hempr. & Ehr.
286. *Centhmochares intermedius*, Sharpe.

ORDER XXXII. SCANSORES.

FAMILY INDICATORIDÆ.

287. *Indicator indicator* (Gm.).
288. *I. variegatus*, Less.
289. *I. minor*, Steph.
290. *I. pygmæus*, Reichen.
291. *I. exilis* (Cass.).
292. *I. emini*, Shelley.

FAMILY CAPITONIDÆ.

293. *Erythrobucco rolleti* (De Fil.).
294. *Lybius æquatorialis* (Shelley).
295. *L. leucocephalus* (De Fil.).

296. *Lybius abyssinicus* (Lath.)
297. *L. rubrifacies* (Reichen.).
298. *Tricholæma ansorgei*, Shelley.
299. *T. lachrymosum*, Cab.
300. *T. stigmatothorax*, Cab.
301. *T. diadematum* (Heugl.).
302. *T. massaicum* (Reichen.).
303. *Gymnobucco cinereiceps*, Sharpe.
304. *Barbatula ugandæ*, Reichen.
305. *B. centralis*, Reichen.
306. *B. jacksoni*, Sharpe.
307. *B. leucolæma*, J. & E. Verr.
308. *B. leucomystax*, Sharpe.
309. *B. stellata* (Jard. & Fraser).
310. *Trachyphonus versicolor*, Hartl.
311. *T. arnaudi* (Des Murs).
312. *Trachylæmus elgonensis* (Sharpe).

FAMILY PICIDÆ.

313. *Campothera nubica* (Gm.).
314. *C. naumani*, Reichen.
315. *C. balia*, Heugl.
316. *C. maculosa* (Valenc.).
317. *C. pennista* (Reichen.).
318. *C. tæniolæma* (Reichen. & Neum.).
319. *Dendropicus hartlaubi*, Malh.
320. *D. nyansæ* (Neum.).
321. *D. tropicalis*, Reichen.
322. *D. pœcilolæmus*, Reichen.
323. *D. lafresnayi*, Malh.
324. *D. sharpei*, Oust.
325. *Thripias schoënsis*, Rüpp.
326. *Jynyipicus obsoletus* (Wagl.).
327. *J. ingens*, Hartert.
328. *Mesopicus centralis*, Reichen.
329. *Jynx ruficollis*, Wagl.

ORDER XXXVI. PASSERIFORMES.

FAMILY HIRUNDINIDÆ.

330. *Cliricola riparia* (Linn.).
331. *C. cincta* (Bodd.).
332. *C. minor* (Cab.).
333. *Ptyonoprogne rufigula* (Fischer & Reichen.).
334. *Hirunda rustica*, Linn.
335. *H. arcticincta*, Sharpe.
336. *H. æthiopica*, Blanf.
337. *H. griseopyga*, Sundev.
338. *H. puella*, Temm. & Schl.

339. *Hirunda emini*, Reichen.
340. *H. gordoni*, Jard.
341. *H. senegalensis*, Linn.
342. *H. monteiri*, Hartl.
343. *Psalidoprocne orientalis*, Reichen.
344. *P. albiceps*, Sclater.

FAMILY MUSCICAPIDÆ.

345. *Alseonax murina*, Fischer & Reichen.
346. *A. pumila*, Reichen.
347. *Muscicapa grisola*, Linn.
348. *M. infulata*, Hartl.
349. *M. tornensis*, Hartert.
350. *Pedilorhynchus stuhlmanni*, Reichen.
351. *Dioptrornis fischeri* Reichen.
352. *Melænornis pammelæna* (Stanl.).
353. *M. tropicalis*, Cab.
354. *Bradyornis grisea*, Reichen.
355. *B. pallida* (Müll.).
356. *B. subalaris*, Sharpe.
357. *B. pumila*, Sharpe.
358. *B. minor* Heugl.
359. *Stizorhina fraseri* (Strickl.).
360. *Empidornis kavirondensis* (Neum.).
361. *Hyliota flavigastra*, Swains.
362. *Pogonocichla orientalis*, Fischer & Reichen.
363. *P. intensa*, Sharpe.
364. *Lioptilus abyssinicus* (Rüpp.).
365. *Parisoma plumbeum* (Hartl.).
366. *P. jacksoni*, Sharpe.
367. *Chloropeta massaica*, Fischer & Reichen.
368. *Batis senegalensis* (Linn.).
369. *B. orientalis* (Heugl.).
370. *Platystira albifrons*, Sharpe.
371. *P. cyanea* (Müll.).
372. *P. jacksoni*, Sharpe.
373. *Bias musicus* (Vieill.).
374. *Megabias atrialatus* (Cass.).
375. *Smithornis capensis* (Smith).
376. *Artomyias fuliginosa*, J. & E. Verr.
377. *Trochocercus albonotatus*, Sharpe.
378. *Terpsiphone cristata* (Gm.)
379. *T. rufiventris* (Swains.).
380. *T. emini*, Reichen.
381. *Elminia teresiti*, Antin.
382. *Cryptolopha mackenziana*, Sharpe.

FAMILY CAMPOPHAGIDÆ.

383. *Graucalus purus*, Sharpe.
384. *G. pectoralis*, Jard. & Selb.

385. *Campophaga phœnicea* (Lath.).
386. *C. hartlaubi* (Salvad.).
387. *C. quiscalina* (Finsch).

Family Pycnonotidæ

388. *Criniger verreauxi*, Sharpe.
389. *C. cabanisi*, Sharpe.
390. *Bleda pallidigula* (Sharpe).
391. *B. flavigula* (Cab.).
392. *B. shelleyi* (Neum.).
393. *B. kakumegæ* (Sharpe).
394. *B. kikuyuensis* (Sharpe).
395. *B. orientalis* (Hartl.).
396. *Andropadus lætissimus*, Sharpe.
397. *Eurillas virens* (Cass.).
398. *E. eugenius* (Reichen.).
399. *Stelgidillas gracilirostris* (Strickl.).
400. *S. gracilis* (Cab.).
401. *Phyllostrophus strepitans*, Reichen.
402. *P. rufescens*, Hartl.
403. *P. placidus*, Shelley.
404. *Pycnonotus minor*, Heugl.
405. *P. dodsoni*, Sharpe.
406. *P. layardi*, Gurney.

Family Timeliidæ

407. *Argya rubiginosa*, Rüpp.
408. *A. rufula*, Heugl.
409. *A. amaurura*, Pelz.
410. *Turdinus jacksoni*, Sharpe.
411. *Ptyrticus turdinus*, Hartl.
412. *Craterops plebeius*, Rüpp.
413. *C. buxtoni*, Sharpe.
414. *C. sharpei*, Reichen.
415. *C. tenebrosus*, Hartl.

Family Turdidæ

416. *Geocichla piaggiæ* (Bour.).
417. *Turdus pelios*, Bp.
418. *T. bocagei*, Cab.
419. *Merula elgonensis* Sharpe.
420. *Cichladusa guttata* Heugl.
421. *Cossypha oleæma*, Reichen.
422. *C. natalensis*, Smith.
423. *C. poliopterа*, Reichen.
424. *C. subrufescens* Bocage.
425. *C. heuglini*, Hartl.
426. *C. melanonota* Cab.).
427. *C. verticalis*, Hartl.
428. *Erythropygia ruficauda*, Sharpe.

429. *Erythropygia hartlaubi*, Reichen.
430. *Callene pyrrhoptera*, Reichen. & Neum.
431. *Thamnolæa subrufipennis*, Reichen.
432. *T. levaillanti* (Reichen.).
433. *T. shelleyi*, Sharpe.
434. *Pentholæa clericalis*, Hartl.
435. *P. baucis*, Hartl.
436. *Pinarochroa hypospodia*, Shelley.
437. *Pratincola rubicola* (Linn.).
438. *P. emmæ*, Hartl.
439. *P. axillaris*, Shelley.
440. *P. rubetra* (Linn.)
441. *Monticola rufocinerea* (Rüpp.).
442. *Ruticilla phœnicurus* (Linn.).
443. *Myrmecocichla cryptoleuca*, Sharpe.
444. *Saxicola œnanthe* (Linn.).
445. *S. isabellina* (Rüpp.).
446. *S. pleshanka* (Lepsch.).
447. *S. schalowi*, Sharpe.
448. *S. falkensteini*, Cab.
449. *Campicola albonotata* (Neum.).

FAMILY SYLVIIDÆ.

450. *Luscinia philomela* (Bechst.).
451. *Sylvia hortensis*, Bechst.
452. *S. atricapilla* (Linn.).
453. *Phylloscopus trochilus* (Linn.).
454. *Hypolais pallida* (Hempr. & Ehr.).
455. *Acrocephalus phragmitis* (Bechst.).
456. *A. turdoides* (Meyer).
457. *A. palustris* (Bechst.).
458. *A. streperus* (Vieill).
459. *A. bæticatus* (Vieill.).
460. *Bradypterus cinnamomeus* (Rüpp.).
461. *Schœnicola apicalis* (Cab.).
462. *Calamocichla leptorhyncha* (Fischer & Reichen.).
463. *C. jacksoni*, Neum.
464. *Calamonastes simplex* (Cab.).
465. *Eminia lepida*, Hartl.
466. *Apalis pulchra*, Sharpe.
467. *A. porphyrolæma* (Reichen. & Neum.).
468. *Euprinodes cinereus*, Sharpe.
469. *E. golzi* (Fischer & Reichen.).
470. *E. æquatoralis*, Neum.
471. *Dryodromas jacksoni*, Sharpe.
472. *Drymocichla incana*, Hartl.
473. *Phyllolais pulchella* (Cretzschm.).
474. *Sylviella brachyura* (Lafr.).
475. *S. jacksoni*, Sharpe.
476. *S. leucophrys*, Sharpe.

477. *Sylviella baraka*, Jackson.
478. *Eremomela griseoflava* (Heugl.)
479. *E. hypoxantha*, Pelz.
480. *E. elegans* (Heugl.).
481. *E. flavotorquata* (Hartl.).
482. *Camaroptera brevicaudata* (Cretzschm.).
483. *C. griseoviridis* (Müll.).
484. *Hylia prasina* (Cass.).
485. *Prinia mystacea*, Rüpp.
486. *Burnesia reichenowi*, Hartl.
487. *B. melanops*, Reichen. & Neum.
488. *Orthotomus erythropterus* (Jard.).
489. *Melocichla mentalis* Fraser).
490. *M. orientalis*, Sharpe.
491. *Cisticola emini*, Reichen.
492. *C. lateralis* (Fraser).
493. *C. cinerascens* (Heugl.).
494. *C. erythrops* (Hartl.).
495. *C. fischeri*, Reichen.
496. *C. rufa* Fraser
497. *C. ferruginea* (Hartl.).
498. *C. hartlaubi*, Sharpe.
499. *C. cisticola* (Temm.).
500. *C. terrestris* (Smith).
501. *C. hindei*, Sharpe.
502. *C. tinniens* (Licht.).
503. *C. nuchalis*, Reichen.
504. *C. ambigua*, Sharpe.
505. *C. strangei* (Fraser).
506. *C. lugubris* (Rüpp.).
507. *C. subruficapilla* (Smith).
508. *C. cheniana* (Smith).
509. *C. prinioides*, Neum.
510. *C. hunteri*, Shelley.
511. *C. chubbi*, Sharpe.

Family Prionopidæ.

512. *Prionops cristatus*, Rüpp.
513. *P. poliolophus*, Fischer & Reichen.
514. *Sigmodus graculinus* (Cab.).
515. *Eurocephalus ruepelli*, Bp.

Family Laniidæ.

516. *Corvinella affinis*, Heugl.
517. *Lanius humeralis*, Stanl.
518. *L. excubitorius*, Des Murs.
519. *L. caudatus*, Cab.
520. *L. mackinnoni*, Sharpe.
521. *L. minor*, Gm.
522. *L. dorsalis*, Cab.
523. *L. antinori*, Salvad.

524. *Lanius paradoxus*, Brehm.
525. *L. gubernator*, Hartl.
526. *L. isabellinus*, Hempr.
527. *Nilans afer* (Lath.).
528. *N. nigritemporalis*, Reichen.
529. *Linarius luehderi*, Reichen.
530. *L. æthiopicus* (Gm.).
531. *L. major*, Hartl.
532. *L. nigerrimus* (Reichen.).
533. *L. funebris* (Hartl.).
534. *Dryscopus uandensis*, Sharpe.
535. *D. jacksoni*, Sharpe.
536. *D. cinerascens*, Hartl.
537. *D. malzacii*, Heugl.
538. *D. nyansæ*, Neum.
539. *D. suahelicus*, Neum.
540. *Antichromus minutus* (Hartl.).
541. *Telephonus senegalus* (Linn.).
542. *T. blanfordi*, Sharpe.
543. *T. minor*, Reichen.
544. *T. emini*, Reichen.
545. *Malaconotus blanchoti* (Steph.).
546. *M. dohertyi*, Rothsch.
547. *M. sulphureipectus* (Less.).
548. *Nicator chloris* (Less.).

FAMILY PARIDÆ.

549. *Parus leucopterus*, Swains.
550. *P. nigricinereus*, Jackson.
551. *P. barakæ*, Jackson.
552. *P. albiventris*, Shelley.
553. *Anthoscopus parvulus* (Heugl.).
554. *A. musculus* (Hartl.).

FAMILY NECTARINIIDÆ.

555. *Hedydipna platura* (Vieill.).
556. *Drepanorhynchus reichenowi*, Sharpe.
557. *Nectarinia ænigularis*, Sharpe.
558. *N. kilimensis*, Shelley.
559. *N. pulchella* (Linn.).
560. *Cinnyris cuprea* (Shaw).
561. *C. superbus* (Shaw).
562. *C. erythrocerias* (Heugl.).
563. *C. suahelicus*, Reichen.
564. *C. falkensteini*, Fischer & Reichen.
565. *C. ansorgei*, Hartert.
566. *C. chloropygia* (Jard.).
567. *C. mediocris*, Shelley.
568. *C. orphogastra*, Reichen.
569. *C. reichenowi*, Sharpe.
570. *Chalcomitra acik* (Antinori).

571. *Chalcomitra æquatoralis* (Reichen.).
572. *C. inæstimata* (Hartert).
573. *C. hunteri* (Shelley).
574. *C. kirki* (Shelley).
575. *C. kalckrenthi* (Cab.).
576. *C. doggetti* (Sharpe).
577. *C. angolensis* Less.).
578. *Cyanomitra obscura* (Jard.).
579. *C. ragazzii* (Salvad.).
580. *C. cyanolæma* (Jard.).
581. *C. verticalis* (Lath.).
582. *C. viridisplendens* Reichen.).
583. *Anthothreptes orientalis* (Hartl.).
584. *A. hypodila* Jard.).
585. *A. tephrolæma* (Jard. & Fraser).

FAMILY ZOSTEROPIDÆ.

586. *Zosterops senegalensis*, Bp.
587. *Z. kikuyuensis*, Sharpe.
588. *Z. stuhlmanni*, Reichen.
589. *Z. jacksoni*, Neum.

FAMILY CERTHIIDÆ.

590. *Salpornis salvadorii* (Bocage).

FAMILY MOTACILLIDÆ.

591. *Motacilla vidua*, Sundev.
592. *M. alba*, Linn.
593. *M. capensis*, Linn.
594. *M. melanope*, Pall.
595. *M. campestris*, Pall.
596. *M. flava*, Linn.
597. *M. cinereicapilla*, Savi.
598. *M. feldeggi*, Micah.
599. *Anthus trivialis* Linn.).
600. *A. latistriatus*, Jackson.
601. *A. gouldi*, Fraser
602. *A. nicholsoni*, Sharpe.
603. *A. rufulus*, Vieill.
604. *A. cervinus* (Pall.).
605. *Macronyx croceus* (Vieill.).
606. *M. wintoni*, Sharpe.

FAMILY ALAUDIDÆ.

607. *Mirafra athi*, Hartert.
608. *M. fischeri*, Reichen.
609. *M. apiata* (Vieill.).
610. *M. bucolica*, Hartl.
611. *Heliocorys modesta* (Heugl.).
612. *Tephrocorys cinerea* (Gm.).
613. *Pyrrhulauda leucotis* (Stanl.).
614. *P. signata*, Oust.

FAMILY FRINGILLIDÆ.

615. *Emberiza flaviventris* (Vieill.).
616. *E. orientalis*, Shelley.
617. *Fringillaria tahapisi* (Smith).
618. *F. septemstriata* (Rüpp.).
619. *F. saturatior*, Sharpe.
620. *Chrysomitris melanops* (Heugl.).
621. *Petronia pyrgita* (Heugl.).
622. *Passer ruficinctus*, Fischer & Reichen.
623. *P. shelleyi*, Sharpe.
624. *P. ugandæ*, Reichen.
625. *P. gongonensis*, Oust.
626. *Sorella emini*, Hartl.
627. *Poliospiza reichardi* Reichen.
628. *Serinus flavivirtex* (Blanf.).
629. *S. sharpei*, Neum
630. *S. flaviventris* (Swains.).
631. *S. imberbis* Cab.).
632. *S. icterus* Bonn. & Vieill.).
633. *S. barbatus* (Heugl.).
634. *S. capistratus* (Finsch).
635. *S. affinis* (Richm.).
636. *S. albifrons* (Sharpe).
637. *S. leucopygius* (Sundev.).
638. *S. reichenowi*, Salvad.
639. *S. angolensis* (Gm.).
640. *S. dorsostriatus* (Reichen.).

FAMILY PLOCEIDÆ.

641. *Vidua principalis* (Gm.).
642. *Steganura paradisea* (Linn.).
643. *Chera progne* (Bodd.).
644. *Penthetria ardens* (Bodd.).
645. *P eques* (Hartl.).
646. *Penthetriopsis macrurus* (Gm.).
647. *P. soror* (Reichen.).
648. *P. humeralis*, Sharpe.
649. *Drepanoplectes jacksoni*, Sharpe.
650. *Urobrachya phœnicea* (Heugl.).
651. *U. affinis*, Cab.
652. *U. traversi*, Salvad.
653. *Pyromelana flammiceps* (Swains.).
654. *P. nigrifrons*, Böhm.
655. *P. ansorgei*, Hartert.
656. *P. franciscana* (Linn.).
657. *P. diademata* (Fischer & Reichen.).
658. *P. xanthomelæna* (Rüpp.).
659 *P. taha* (Smith).
660. *P. ladoensis* (Reichen.).
661. *Ploceipasser melanorhynchus*, Rüpp.

662. *Ploceipasser superciliosus* (Cretzschm.).
663. *P. donaldsoni*, Sharpe.
664. *Philæterus arnaudi* (Bp.).
665. *P. dorsalis* (Reichen.).
666. *Pyrenestes coccineus*, Cass.
667. *Quelea erythrops* (Hartl.).
668. *Q. cardinalis* (Hartl.).
669. *Q. æthiopica* (Sundev.).
670. *Q. quelea* (Linn.).
671. *Spermestes stigmatophorus*, Reichen.
672. *S. cucullata*, Swains.
673. *S. scutata*, Heugl.
674. *Ortygospiza polyzona* (Temm.).
675. *O. atricollis* (Vieill.).
676. *Lagonostricta monteiri* (Hartl.).
677. *L. minima* (Vieill.).
678. *L. brunneiceps*, Sharpe.
679. *L. polionota*, Shelley.
680. *L. rara* (Antin.).
681. *L. rhodoparia*, Heugl.
682. *Amadina fasciata*, Swains.
683. *Zonogastris melba* (Linn.).
684. *Z. sudanensis*, Sharpe.
685. *Pytelia phœnicoptera*, Swains.
686. *P. afra* (Gm.).
687. *P. ansorgei*, Hartert.
688. *P. schlegeli*, Sharpe.
689. *Coccopygia kilimensis*, Sharpe.
690. *Hypochæra ultramarina* (Gm.).
691. *H. purpurascens*, Reichen.
692. *Nigrita schistacea*, Sharpe.
693. *N. sparsimguttata*, Reichen.
694. *N. dohertyi* Hartert.
695. *Sporæginthus subflavus* (Vieill.).
696. *Uroloncha caniceps* (Reichen.).
697. *Estrilda astrild* (Linn.).
698. *E. minor* (Cab.).
699. *E. cinerea* (Vieill.).
700. *E. rhodopyga*, Sundev.
701. *E. paludicola*, Heugl.
702. *E. roseicrissa*, Reichen.
703. *E. erythronota* (Vieill.).
704. *E. nonnula*, Hartl.
705. *E. phœnicotis*, Swains.
706. *Granatina ianthinogastra*, Reichen.
707. *Sporopipes frontalis* Dand.).
708. *Icteropsis pelzelni* (Hartl.).
709. *Anoplectes melanotis* (Lafr.).
710. *Heterhyphantes nigricollis* (Vieill.).
711. *H. melanoxanthus* (Cab.).
712. *H. reichenowi*, Fischer.

758. *Lamprocolius glaucovirens*, Elliot.
759. *L. purpureus* (Müll.).
760. *L. chalybeus* (Ehr.).
761. *L chloropterus* (Swains.).
762. *L. chalcurus* (Nordm.).
763. *Spreo superbus* (Rüpp.).
764. *Buphaga africana*, Linn.
765. *B. erythrorhyncha*, Stanl.

FAMILY CORVIDÆ.

766. *Cryptorhina afra* (Linn.).
767. *Corvus scapulatus*, Dand.
768. *C. edithæ*, Lort Phillips.
769. *Rhinocorax affinis* (Rüpp.).
770. *Heterocorax capensis* (Licht.).
771. *Corvultur albicollis* (Lath.).

253. A BRACE OF WHALE-HEADED STORKS

LIST OF THE

COLD-BLOODED VERTEBRATES HITHERTO RECORDED FROM THE UGANDA PROTECTORATE [CORRECTED DOWN TO 1904].

BY G. A. BOULENGER, F.R.S., V.P.Z.S.

REPTILIA.

CHELONIA.

Cryptodira.

TESTUDINIDÆ.

1. *Testudo pardalis*. Bell.
2. *Cinyxis belliana*, Gray.

Pleurodira.

PELOMEDUSIDÆ.

3. *Pelomedusa galeata*, Schoepff.
4. *Sternothærus sinuatus*, Smith.

EMYDOSAURIA.

CROCODILIDÆ.

5. *Crocodilus niloticus*, Laur.

SQUAMATA.

Lacertilia.

GECKONIDÆ.

6. *Hemidactylus brookii*, Gray.
7. *Lygodactylus picturatus*, Ptrs.

AGAMIDÆ.

8. *Agama colonorum*, Daud.
9. *A. planiceps*, Ptrs.
10. *A. atricollis*, Smith.
11. *A. gregorii*, Gthr.

CHAMÆSAURIDÆ.

12. *Chamæsaura annectens*, Blgr.
13. *C. tænuior*, Gthr.

VARANIDÆ.

14. *Varanus ocellatus*, Rüpp.
15. *V. niloticus*, L.

LACERTIDÆ.

16. *Lacerta jacksoni*, Blgr.
17. *Nucras tessellata*, Smith.
18. *Eremias spekii*, Gthr.

GERRHOSAURIDÆ.

19. *Gerrhosaurus nigrolineatus*, Hallow.

SCINCIDÆ.

20. *Mabuia maculilabris*, Gray.
21. *M. megalura*, Ptrs.
22. *M. varia*, Ptrs.
23. *M. striata*, Ptrs.
24. *Lygosoma sundevalli*, Smith.
25. *L. modestum*, Gthr.
26. *Ablepharus wahlbergii*, Smith.

ANELYTROPIDÆ.

27. *Feylinia currori*, Gray.

RHIPTOGLOSSA.

CHAMÆLEONTIDÆ.

28. *Chamæleon lævigatus*, Gray.
29. *C. dilepis*, Leach.
30. *C. bitæniatus*, Fisch.
31. *C. elliotti*, Gthr.
32. *C. hoehneli*, Stdr.
33. *C. sphæropholis*, Reichen.
34. *C. xenorhinus*, Blgr.
35. *C. jacksoni*, Blgr.
36. *C. johnstoni*, Blgr.
37. *Rhampholeon kersteni*, Ptrs.

OPHIDIA.

TYPHLOPIDÆ.

38. *Typhlops punctatus*, Leach.

GLAUCONIIDÆ.

39. *Glauconia emini*, Blgr.

BOIDÆ.

40. *Python sebæ*, L.

COLUBRIDÆ.

41. *Tropidonotus olivaceus*, Ptrs.
42. *Bothrophthalmus lineatus*, Ptrs.
43. *Boodon lineatus*, Ptrs.
44. *Lycophidium capense*, Smith.
45. *Chlorophis emini*, Gthr.
46. *C. hoplogaster*, Gthr.
47. *C. irregularis*, Leach.
48. *Philothamnus semivariegatus*, Smith.
49. *Rhamnophis jacksoni*, Gthr.
50. *Coronella semiornata*, Ptrs.
51. *Scaphiophis albopunctatus*, Ptrs.
52. *Homalosoma lutrix*, L.
53. *Grayia smythii*, Leach.
54. *G. tholloni*, Mocq.
55. *Dasypeltis scabra*, L.
56. *Dipsadomorphus blandingii*, Hallow.
57. *Leptodira hotamboia*, Laur.
58. *Trimerorhinus tritæniatus*, Gthr.
59. *Psammophis sibilans*, L.
60. *P. punctulatus*, D. & B.
61. *Thelotornis kirtlandii*, Hallow.
62. *Calamelaps unicolor*, Rhdt.
63. *Elapechis guentheri*, Bocage.
64. *Naia melanoleuca*, Hallow.
65. *Dendraspis jamesoni*, Traill.

VIPERIDÆ.

66. *Causus rhombeatus*, Licht.
67. *Bitis arietans*, L.
68. *B. gabonica*, D. & B.
69. *Atheris squamiger*, Hallow.
70. *Atractaspis irregularis*, Rhdt.
71. *A. aterrima*, Gthr.

BATRACHIA.

Ecaudata.

PHANEROGLOSSA.

BUFONIDÆ.

1. *Bufo regularis*, Reuss.

ENGYSTOMATIDÆ.

2. *Breviceps verrucosus*, Rapp.

RANIDÆ.

3. *Rana delalandii*, D. & B.
4. *R. mascareniensis*, D. & B.
5. *R. stenocephala*, Blgr.
6. *R. nutti*, Blgr.
7. *Phrynobatrachus acridoides*, Cope.
8. *Chiromantis xerampelina*, Ptrs.
9. *Rappia cinctiventris*, Cope.
10. *R. marmorata*, Rapp.
11. *Megalixalus fornasinii*, Bianc.
12. *Cassina senegalensis*, D. & B.

AGLOSSA.

DACTYLETHRIDÆ.

13. *Xenopus muelleri*, Ptrs.

PISCES.

CROSSOPTERYGII.

POLYPTERIDÆ.

1. *Polypterus bichir*, Geoffr.
2. *P. endlicheri*, Heck.
3. *P. senegalus*, Cuv.

DIPNOI.

LEPIDOSIRENIDÆ.

4. *Protopterus æthiopicus*, Heck.

MALACOPTERYGII.

Mormyridæ.

5. *Marcusenius isidori*, C. & V.
6. *Gnathonemus cyprinoides*, Linn.
7. *G. longibarbis*, Hilgend.
8. *Hyperopisus bebe*, Lacep.
9. *Mormyrus hasselquisti*, C. & V.
10. *M. kannume*, Forsk.

OSTARIOPHYSI.

Characinidæ.

11. *Hydrocyon forskalii*, Cuv.
12. *H. lineatus*, Blkr.
13. *Alestes dentex*, L.
14. *A. baremose*, Joann.
15. *A. nurse*, Rüpp.
16. *A. macrolepidotus*, C. & V.
17. *Micralestes acutidens*, Ptrs.
18. *Distichodus niloticus*, Linn.
19. *D. rostratus*, Gthr.
20. *Nannocharax niloticus*, Joann.
21. *Citharinus latus*, M. & T.

Cyprinidæ.

22. *Labeo horie*, Heck.
23. *L. coubie*, Rüpp.
24. *L. cylindricus*, Ptrs.
25. *L. victorianus*, Blgr.
26. *Discognathus johnstoni*, Blgr.
27. *Barbus eduardianus*, Blgr.
28. *B. fergusonii*, Blgr.
29. *B. doggetti*, Blgr.
30. *B. bynni*, Forsk.
31. *B. radcliffii*, Blgr.
32. *B. tetraspilus*, Pfeff.
33. *B. altus*, Pfeff.
34. *B. macropristis*, Blgr.
35. *B. nummifer*, Blgr.
36. *B. perince*, Rüpp.
37. *B. anema*, Blgr.
38. *Barilius niloticus*, Joann.
39. *B. loati*, Blgr.
40. *Chelæthiops bibie*, Joann.
41. *Neobola bottegi*, Vincig.

Siluridæ.

42. *Clarias lazera*, C. & V.
43. *C. moorii*, Blgr.
44. *Schilbe mystus*, C. & V.
45. *S. emini*, Hilgend.
46. *Auchenoglanis biscutatus*, Geoffr.
47. *A. occidentalis*, C. & V.
48. *Clarotes laticeps*, Rüpp.
49. *Chrysichthys auratus*, Geoffr.
50. *Synodontis zambezensis*, Ptrs.
51. *S. afro-fischeri*, Hilgend.
52. *S. schall*, Bl.
53. *S. frontosus*, Vaill.
54. *S. batensoda*, Rüpp.
55. *Mochocus niloticus*, Joann.
56. *Malopterurus electricus*, Gm.

HAPLOMI.

Cyprinodontidæ.

57. *Haplochilus atripinnis*, Pfeff.
58. *Fundulus tæniopygus*, Hilgend.

PERCESOCES.

Ophiocephalidæ.

59. *Ophiocephalus obscurus*, Gthr.

Anabantidæ.

60. *Anabas petherici*, Gthr.

ACANTHOPTERYGII.

SERRANIDÆ.

61. *Lates niloticus, Linn.*

CICHLIDÆ.

62. *Hemichromis bimaculatus*, Gill.
63. *Paratilapia longirostris*, Hilgend.
64. *P. cavifrons*, Hilgend.
65. *P. retrodens*, Hilgend.
66. *P. serranus*, Pfeff.
67. *P. wingatii*, Blgr.
68. *Tilapia nilotica*, Linn.
69. *T. galilæa*, Hasselq.
70. *T. zillii*, Gerv.
71. *T. nuchisquamulata*, Hilgend.
72. *Petrochromis andersoni*, Blgr.
73. *Astatoreochromis alluandi*, Pellegr.

OPISTHOMI.

MASTACEMBELIDÆ.

74. *Mastacembelus victoriæ*, Blgr.

PLECTOGNATHI.

TETRODONTIDÆ.

75. *Tetrodon fahaka*, Hasselq.

LAND MOLLUSCS OF UGANDA.

BY EDGAR A. SMITH.

COMPARATIVELY little is known of the land molluscs of this country. A certain number of species collected by Dr. F. Stuhlmann at various places near the north-west border of the Victoria Lake and in the Ruwenzori region have been described by Dr. E. von Martens * and Dr. H. Simroth.* A few collected by Mr. G. F. Scott-Elliot, also in the Ruwenzori country, were described by the writer; † four new species from the Mau Escarpment on the east have lately been published,‡ and a few species collected by Dr. Gregory in the neighbourhood of Lake Baringo and in the lake itself were recorded in the *Proceedings of the Malacological Society of London*, vol. i. pp. 163–168.

In the following lists the species from the Ruwenzori district are marked (*a*), those from the more central part of the Protectorate (*b*), and those from the eastern side of the country (*c*).

The following is a list of the known forms:—

FAMILY UROCYCLIDÆ.

Trichotoxon maculatum, Simroth (*b*).

FAMILY VERONICELLIDÆ.

Veronicella stuhlmanni, Simroth (*a*).
V. schnitzleri, Simroth (*a*).

* "Deutsch Ost-Afrika," vol. iv.
† Smith, *Proc. Malac. Soc.*, vol. i.
‡ Smith, *Journ. Malacol.*, vol. viii.

Family Streptoxidæ.

Enrica exogonia, Martens (*a*).
E. curvilamella, Smith (*a*).
E. limbata, Martens (*a*).
E. geminata, Martens (*a*).
E. runssorana, Martens (*a*).
E. paradoxula, Martens (*a*).
E. ugandensis, Smith (*c*).
E. peculiaris, Smith, var. (*b*).
E. stuhlmanni, Martens (*b*).
Streptostele costulata, var. *minor*, Martens (*a*).

Family Vitrinidæ.

Helicarion stuhlmanni, Martens (*a*).
H. caillaudi, Martens (*a*).
H. succulentus, Martens (*a*).
H. lymphascens, Martens (*a*).
Vitrina baringoensis, Smith (*c*).
V. obesa, Martens (*a*).

Family Tonitidæ.

Thapsia hanningtoni, Smith, var. *fasciata*, Mts. (*b*); var. *stuhlmanni*, Mts. (*a*).
T. eminiana, Smith ? (*a*).
Moaria bellula, Martens (*b*).
Martensia mozambicensis, Pfeiffer (*b*).
M. permanens, Smith (*c*).

Family Helicidæ.

Helix karevia, Martens (*a*).
H. runssorina, Martens (*a*).

Family Pupidæ.

Buliminus bambuseti, Martens (*c*).
B. trapezoideus, Martens (*a*).
B. rectirugis, Martens (*a*).
B. stuhlmanni, Martens (*a*).
B. ugandæ, Martens (*b*).

Family Stenogyridæ.

Burtoa nilotica, Pfeiffer (*a*).
Limicolaria dohertyi, Smith (*c*).
L. turriformis, Martens (*b*).
L. dimidiata, Martens (*c*).
L. rohlfsi, Martens (*b*).
L. mediomaculata. Martens (*c*).
L. connectens, Martens (*a*), (*b*).
L. martensiana, Smith (*a*).
L. saturata, Smith (*a*).
L. ventricosa, Smith (*a*).
Glossula runssorina, Martens (*a*).
Subulina castanea, Martens (*a*).

Subulina membriensis, Smith, var. *circumstriata*, Martens (*a*).
S. bicolumallaris, Martens (*a*).
S. paucispira, Martens (*c*).
Opeas subvaricosa, Martens (*a*).
O. streptostaloides, Martens (*b*).
O. crenulata, Smith (*c*).
Geostilbia stuhlmanni, Martens (*a*).

FAMILY CYCLOPHORIDÆ.

Cyclophorus (*Aferulus*) *intermedius*, Martens (*b*).

The following species have been recorded from Lake Victoria :—

FAMILY LIMNÆIDÆ.

Limnæa debaizei, Bourguignat.
L. nyansæ, Martens.
Isidora trigona, Martens.
I. strigosa, Martens.
I. transversalis, Martens.
I. forskali, Ehrenberg.
Physopsis ovoidea, Bourguignat.
Planorbis choanomphalus, Martens.
P. sudanicus, Martens.
P. victoriæ, Smith.
Aucylus stuhlmanni, Martens.

FAMILY MELANIIDÆ.

Melania tuberculata, Müller.

FAMILY AMPULLARIIDÆ.

Ampullaria nyanzæ, Smith.
A. ovata, Olivier.
A. gordoni, Smith.
A. latourvieuxi, Bourguignat.
Lanistes schweinfurthi, Martens.

FAMILY VIVIPARIDÆ.

Vivipara abyssinica, Martens.
V. phthinotropis, Martens.
V. rubicunda, Martens.
V. trochlearis, Martens.
V. costulata, Martens.
V. meta, Martens.
V. capillata, Frauenfeld.
V. victoriæ, Smith.
V. jucunda, Smith.
V. capoides, Smith.
V. unicolor, Olivier.
Cleopatra guillemei, Bourguignat
Bithynia humerosa, Martens.

FAMILY CYRENIDÆ.

Corbicula radiata (*Parreyss*), Philippi.
Sphærium stuhlmanni, Martens.
S. nyanzæ, Smith.
Eupera parasitica (*Parreyss*), Deshayes.

FAMILY UNIONIDÆ.

Unio bakeri, H. Adams.
U. acuminatus, H. Adams.
U. emini, Martens.
U. multicolor, Martens.
U. hautcœuri, Bourguignat.
U. grandidieri, Bourguignat.
U. edwardsianus, Bourguignat.
U. duponti, Bourguignat.
U. grantianus, Bourguignat.
U. monceti, Bourguignat.
U. ruellani, Bourguignat.
U. lourdeli, Bourguignat.
Mutela rubens, Lamarck.
M. subdiaphana, Bourguignat.
M. bourguignati, Bourguignat.
Spatha (*Spathella*) *bourguignati*, Ancey.
S. martensi, Sturany.
S. trapezia, Martens.
S. divaricata, Martens.
S. subæquilatera, Martens.

FAMILY ÆTHERIIDÆ.

Ætheria elliptica, Lamarck.

The following forms occur in Lake Albert :—

FAMILY LIMNÆIDÆ.

Planorbis sudanicus, Martens.
P. stanleyi, Smith.

FAMILY MELANIIDÆ.

Melania tuberculata, Müller.
M. liricincta, Smith.

FAMILY VIVIPARIDÆ.

Vivipara rubicunda, Martens.
Cleopatra pirothi, Jickeli.
Bithynia alberti, Smith.
B. walleri, Smith.

FAMILY AMPULLARIIDÆ.

Ampullaria wernei, Philippi.

FAMILY CYRENIDÆ.

Corbicula radiata (*Parreyss*), Philippi.
C. pusilla, Philippi.

FAMILY UNIONIDÆ.

Unio ægyptiacus, Caillaud.
U. caillaudi, Férussac.
U. bakeri, H. Adams.
U. acuminatus, H. Adams.
Spatha (*Spathella*) *bourguignati*, Ancey.
S. stuhlmanni, Martens.
Mutela nilotica, Férussac.

The following species occur in the Lake Albert Edward :—

FAMILY LIMNÆIDÆ.

Planorbis apertus, Martens.
P. sudanicus, Martens.

FAMILY VIVIPARIDÆ.

Viviparа unicolor, Olivier, var. *conoidea*, Martens.
Bithynia alberti, Smith.
B. humerosa, Martens.

FAMILY AMPULLARIIDÆ.

Ampullaria erythrostonia, Reese, var. *stuhlmanni*, Martens.
A. ovata, Olivier, var. *emini*, Martens.

FAMILY MELANIIDÆ.

Melania tuberculata, Müller.

FAMILY CYRENIDÆ.

Corbicula radiata (*Parreyss*), Philippi.

FAMILY UNIONIDÆ.

Unio stuhlmanni, Martens.
U. ugesianus, Martens.

CRUSTACEA.

Thelphusa nilotica, M. E. See Bell, *P.Z.S.*, 1894, p. 166; Mount Elgon—coll. F. J. Jackson.

T. berardi, Sav. Ruwenzori, 5,000 to 6,000 feet—coll. Scott-Elliot; Mount Elgon, 7,000 feet—coll. Johnston.

VERMES.

OLIGOCHÆTA.

Benhamia johnstoni, Beddard, *P.Z.S.*, 1901, p. 203. Ruwenzori, 6,500 feet—coll. Johnston.

F. JEFFREY BELL.

ARACHNIDA OF UGANDA.

Scorpiones.

Pandinus viatoris, Pocock. Kavirondo country (W. J. Ansorge).

Solifugæ.

Salpuga obscura, Kraepelin. Kavirondo country (W. J. Ansorge).
Zeriassa sp. Baringo, 4.000 feet (H. H. Johnston).

Avaneæ (Shioleos).

Ptermochilus murinus, Pocock. Kavirondo country (W. J. Ansorge).
Anoploscelus celeripes, Pocock. Entebbe (H. H. Johnston).
Ctenus carsoni, F. Cambr.? Kavirondo country (W. J. Ansorge).
Palystes ellioti, Pocock. Ruwenzori (G. F. Scott-Elliot).
Nephila lucasii, Simon. Mpanga (H. H. Johnston).
N. pilipes, Lucas. Ruwenzori (G. F. Scott-Elliot).
Aranea pachana, Pocock. Ruwenzori (G. F. Scott-Elliot).
Cœrostris nodulosa, Pocock. Kavirondo country (W. J. Ansorge).
Gasteracantha ornata, Thorell. var. Ruwenzori (G. F. Scott-Elliot).

R. Pocock.

A List of the

LEPIDOPTERA

COLLECTED BY SIR H. H. JOHNSTON AND MR. C. W. HOBLEY IN THE UGANDA PROTECTORATE IN 1900, 1901.

By Dr. Butler.

*** The specimens collected by Mr. Hobley are marked with an asterisk. They were all caught in the Elgon and Nandi districts.

The new species in the accompanying list are:—

Harma johnstoni.
Pseudathyma plutonica.
Aphnœus hollandii.
Cryptomima hampsoni.

List of the Species.

Amauris niavius, Linn.	Toro, June 16th, 1900.
**A. echiria*	
A. enceladus, Brown	Toro, June 16th, 1900.
**A. inferna*	
A. albimaculatus, Butl.	Toro, June 16th, 1900.
Melinda mercedonia, Karsch.	Toro, June 16th, 1900.
**M. formosa*	
Tirumala petiverana, Doubl.	Toro, June, 1900.
Monotrichtis perspicua, Trim.	Ruwenzori, 5,000 feet, Sept., 1900.

†*Monotrichtis safitza* var., Hewits.	Ruwenzori, 4,200 feet, Sept., 1900.
M. saussurei, Dewitz.	Ruwenzori, 5,000 feet, Sept., 1900.
Ypthima granulosa, Butl.	Ruwenzori, 5,000 feet, Sept., 1900.
Y. albida, Butl.	Ruwenzori, 5,000 feet, Sept., 1900.
**Y. asterope*	
Charaxes mimenes, Hewits.	Entebbe, April 30th, 1900.
C. tiridates, Fabr.	Toro, June, 1900.
C. bipunctatus, Rothsch.	Toro, June, 1900.
**C. castor*	
**C. candiope*	
**C. varanes*	
**C. viola*	
**C. rosa*	
**C. cynthia*	
**C. pithodoris*	
**C. neanthus*	
**Cyrestis camillus*	
Precis boopis, Trim.	Port Ugowe, Feb. 20th and July 23rd, 1900.
**P. sophia*	
P. clelia, Cram.	Port Ugowe, Feb. 20th and 21st 1900.
**P. sesamus*	
P. cebrene, Trim.	Port Ugowe, Feb. 20th and 22nd, 1900.
**P. elgiva*	
P. westermanni, Westw.	Toro, June, 1900.
P. terea, Drury	Entebbe, April 20th, 1900.
P. gregorii, Butl.	Toro, June 16th, 1900.
**P. limnoria*	
**P. pyriformis*	
P. chorimene, Guér.	Port Ugowe, April 21st and 22nd, 1900.
**Pseudargynnis hegemone*	
Protogoniomorpha temora, Feld.	Toro, June 16th, 1900.
**P. anacardii*	
**P. nebulosa*	
Hypolimnas salmacis var., Drury	Congo Forest, July 16th, 1900.
H. misippus, Linn.	Port Alice, March 23rd, 1900.
Chloropœa lucretia, Cram.	Toro, June, 1900.
Harma johnstoni, Butl.	Toro, June 16th, 1900.
H. cœnis, Drury	Congo Forest, July 4th, 1900.
H. hobarti, Butl.	Toro, June 16th, 1900.
H. aramis, Hewits.	Congo Forest, July 16th, 1900.
H. theobene, Doubl.	Congo Forest, July 16th, 1900.
**Argynnis hanningtoni*	
Crenio occidentalium, Mab.	Busiro, June 2nd; Toro, June 16th, 1900.

† This is apparently a wet phase of the variety with strongly angulated line below, to which Professor Aurivillius has given the name of *Mycalosis campina*.

Crenio boisduvalii, Wllgr.	Busiro, June 2nd, 1900.
Euphædra eleus var., Drury	Congo Forest, July, 1900.
E. inanum var., Butl.	Toro, June; Congo Forest, July 16th, 1900.
**E. aurivillius*	
E. xypetina, Stgr.	Congo Forest, July 16th, 1900.
E. spatiosa var., Mab.	Toro, June, 1900.
**Spindacis victoriæ*	
Aterica galene, Brown	Congo Forest, July 16th, 1900.
Cynandra opis, Drury	Congo Forest, July 16th, 1900.
Euryphene abesa, Hewits.	Congo Forest, July 16th, 1900.
**E. neo-sophus*	
**Callidryas florella*	
Diestogyna amaranta, Karsch.	♂, Congo Forest, July 16th; ♀, Toro, June 16th, 1900.
Diestogyna sp.? ♀, near *veronica*	Congo Forest, July 16th, 1900
Pseudathyma plutonica, Butl.	Toro, June, 1900.
Kallima rumia, Westw.	Toro, June 16th, 1900.
**K. ansorgei*	
Eurytela hyarba, Fabr.	Busiro, 5,050 feet, June 2nd, 1900.
Ergolis enotrea, Cram.	Toro, June 16th, 1900.
**Catacroptria cloantha*	
**Hyphanis ilethyia*	
Catuna crithea, Drury	Toro, June 16th, 1900.
Neptis nicomedes, Hewit	Busiro, 5,500 feet, June 2nd, 1900.
N. melicerta, Drury	Congo Forest, July 16th, 1900.
**N. agatha*	
**Neptidopsis opione*	
Atella phalantha, Drury	Port Alice, March 20th; Entebbe, April 30th.
**A columbina*	
Acræa toruna, Gr.-Sm.	Toro, June 16th, 1900.
A. alicia, Sharpe	Toro, June 16th, 1900.
A. uvui, Gr. Sm.	Toro, June, 1900.
A. vinidia, Hewits.	Toro, June, 1900.
A. serena var. *rougetii*, Guér.	Port Ugowe, Feb. 20th, 1900.
A. encedon var. *lycia*, Fabr.	Entebbe, April 20th, 1900.
A. omerata, Trim.	Port Ugowe, Feb. 20th and 22nd, 1900.
**A. perenna*	
**A. disjuncta*	
**A. johnstoni*	
**A. sotikensis*	
**A. ventura*	
**A. pharsalus*	
**A. egina*	
**A. neobule*	
**A. esebria* (?)	
A. natalica var. *dissociata*, Gr.-Sm.	Ruwenzori, 7,000 feet, Sept., 1900.
A. zetes var. *menippe*, Drury	Entebbe, March 20th and April 30th, 1900.

Acræa orinata ♀, Oberth.	Entebbe, April 30th, 1900.
A. oreas, E. M. Sharpe	Toro, June 16th, 1900.
**Mylothris agathina*	
**M. ruppellii*	
**M. rubricosta*	
**M. jacksoni*	
**Leptosia medusa*	
**L. alcestor*	
**Hamammida meleagris*	
**Pardopsis punctilissima*	
**Pyrameis cardui*	
**P. abyssinica*	
Megalopalpus zymna, Westw.	Congo Forest, July 16th, 1900.
Zeltus ? antifaunus, Hewits.	Congo Forest, July 16th, 1900.
Aphnœus hollandii, Butl.	Congo Forest, July 16th, 1900.
Cacyreus lingeus, Cram.	Toro, June 16th, 1900.
Azanus natalensis, Trim.	Toro, June 16th, 1900.
Zizera antanossa, Mab.	Port Ugowe, Feb. 22nd, 1900.
Nychitona medusa var. *alcesta*, Cram.	Entebbe, April 30th, 1900.
" " var. *immaculata*, Auriv.	Toro, June 16th, 1900.
Colias electo var. *edusa*, Fabr.	Toro, June, 1900.
**Pieris thysa*	
Terias brigitta var. *zoe*, Hopff.	Port Ugowe, Feb. 21st and 22nd, 1900.
**T. senegalensis*	
T. boisduvaliana, Mab.	Port Ugowe, Feb. 21st and 22nd, 1900.
T. punctinotata ♂, Butl.	Toro, June, 1900.
**Phrissura euloxia*	
**Teraculus chromiferus*	
**T. incretus*	
**T. aurigineus*	
**T. pseudocasta*	
**T. emini*	
**T. ocale*	
**T. gavisa*	
**T. casta*	
Catopsila florella	Port Ugowe, Feb. 21st to 23rd, 1900.
Belenois solilucis, Butl.	Toro, June 16th, 1900.
B. calypso var., Drury	Toro, June 16th, 1900.
B. instabilis, Butl.	Port Ugowe, Feb. 20th; Toro, June 16th, 1900.
**B. dentigera*	
B. formosa, Butl.	Toro, June 16th, 1900.
B. severina var. *infida*, Butl.	Port Ugowe, Feb. 20th to 23rd, 1900.
B. mesentina, Cram.	Port Ugowe, Feb. 20th to 23rd, 1900.
B. raffrayi, Oberth.	Toro, July 16th, 1900.
**B. alba*	

**Glutuphrissa saba*	
Pinacopterya liliana, Gr.-Sm.	Port Ugowe, Feb. 23rd, 1900.
†*Leuceronia argia* ♀, var. *idotea*, Boisd.	Congo Forest, July, 1900.
L. pharis ♂, var., Boisd.	Toro, June, 1900.
Eronia dilatata, Butl.	Port Ugowe, Feb. 23rd, 1900.
**E. argia*	
**E. thalassina*	
**E. cleodora*	
**E. ceda*	
Papilio policenes, Cram.	Port Alice, March 20th, 1900.
P. demodocus, Esper.	Entebbe, April 30th; Toro, June 16th, 1900.
P. lormieri, Distant	Toro, June, 1900.
**P. merope*	
**P. mackinnoni*	
**P. ophidicephalus*	
**P. nireus*	
**P. bromius*	
**P. phorcas*	
**P. corinneus*	
**P. jacksoni*	
**P. leonidas*	
Eretis perpaupera, Holl.	Toro, June 16th, 1900.
**E. obscura*	
**E. lugens*	
Celænorrhinus opalinus ♀, Butl.	Toro, June 16th, 1900.
**C. macrostictus*	
**Rhopalocampta forestan*	
Baoris inconspicua, Bertol.	Entebbe, April 30th, 1900.
**Vanessula milca*	
**Mycalesis aurivilli*	
**M. perspicua*	
**M. desolata*	
**M. ena*	
**M. auriconda*	
**Neocœnyra victoriæ*	
**Enotisia dentata*	
**Lybithia labdaca*	
**Catochrysops osiris*	
**C. asopus*	
**C. telicanus*	
**C. patricia*	
**C. azanus*	
**Lycamesthes kersteni*	
**Polyommatus bœdecus*	
**Cyclopidis metis*	
**Iaira orithia*	
**Panopea tarquinia*	
**Danais chrysippe*	

† Differs from typical *L. idotea* in the narrower border to the wings.

In Sir Harry Johnston's collection there was one moth worth noting, a remarkable new genus of "Clearwings," for which Dr. Butler has proposed the name of—

Cryptomima hampsoni, Butl. . . . . Toro, June 16th, 1900.

Mr. C. W. Hobley caught the following moths in the Nandi District (1900, 1901):—

Nudaurelia zaddachii.
Chœrocampa celeris.
Sphingomorpha monteironis.
Argina serrata.
Phiala xanthosoma.
Metarctia lateritia.
M. flavivina.
Syntomis consimilis.
Cyligramma latona.
Grammodes stolida.
Utethesia pulchella.
Ægrocera rectilinea.
Trigonodes hyppasia.
Dysgonia curvata.
Arva strigosa.
Rigema ornata.
Diacrisia punctaria.
Pompostola scintillaris.

COLEOPTERA.

By C. O. Waterhouse (except where otherwise stated).

Geodephaga.

Carabidæ.

Anthia bucolia, Kolbe. Entebbe (N. shore of Lake Victoria), October, 1900 (Sir H. H. Johnston).

Tefflus delegorguei, Guérin. Uganda (G. F. Scott-Elliot).

Clavicornia.

Silphidæ.

Silpha micans, F. Katwe sub-district, Toro (G. F. Scott-Elliot).

Histeridæ.

Hister sp. Uganda (Sir H. H. Johnston).

Coccinellidæ.

(By G. J. Arrow).

Alesia aurora, Gerst. Ruwenzori, 6,000 feet, and sub-district of Katwe (G. F. Scott Elliot).

Epilachna hirta, Thunb. Neighbourhood of Katwe (G. F. Scott-Elliot).

E. deleta, Muls. With the preceding.

E. tetracycla, Gerst. Ruwenzori, 9,000 feet (G. F. Scott-Elliot).

E. scutellaris, Kolbe. Ruwenzori, 6,000 feet (G. F. Scott-Elliot).

Epilachna sp. n.

LANGURIIDÆ.

Promecolanguria cuprea, Arrow, sp. n.

Reddish brown, head nearly black, elytra with a metallic lustre. Parallel-sided, elongate, head finely and not closely punctured, thorax rather densely, elytra with deeply impressed rows of punctures. Antennæ with a loosely three-jointed club, the two preceding joints very slightly widened. Eyes moderately finely facetted. Prothorax rather longer than wide, with the sides hardly perceptibly curved and slightly approximating behind. Elytra truncate at the extreme apex.

Length, 12 mm.

Hab., Katwe and west of Ruwenzori.

This species is allied to *P. lycoides*, Fowler, but is considerably larger than that or any other described representative of the genus.

Three specimens were found by Mr. Scott-Elliot.

Promecolanguria sp.

Pectinicornia.

LUCANIDÆ.

Homoderus johnstoni, sp. n.

♀. Elongate ovate, moderately convex, cinnamon-brown, dull, slightly shining on the sutures of the elytra only. Antennae and mandibles black. Head black in parts; closely and very coarsely punctured (more so than in *H. mellyi*). Thorax finely rugose, with fine punctures intermixed; the punctures on the front margin and at the hind angles are more distinct. The margins are edged with black; there is a rather large black spot on each side of the disk, and there is a small lateral spot. There is a lightly impressed, but distinct mesial line. Scutalum black, shining. Elytra with the suture and the basal and lateral margins narrowly edged with black; the whole surface rendered dull by the extremely close, fine punctuation. Under side of the body black, with a small obscure red spot on each side of the metasternum. Femora black, with a red line beneath. Tibiæ red, with the spurs and the extreme base black. Tarsi black.

Compared with the ♀ of *H. mellyi*, this species is rather broader. The thorax is somewhat of the same form, but is less emarginate at the sides before the lateral tooth. The anterior tibiæ are much broader; coarsely punctured. The labium is more transverse; the front margin scarcely produced forward in the middle.

Entebbe, October, 1900 (Sir H. H. Johnston).

A single ♀ example only.

Lamellicornia.

TROGIDÆ.

Trox sp. Mount Elgon (Sir H. H. Johnston).

SCARABÆIDÆ.

Scarabæus ægyptiorum, Latr. Baringo, 4,000 feet, December, 1899 (Sir H. H. Johnston).

Anachalcos procerus, Gerst. Baringo, 4,000 feet, December, 1899 (Sir H. H. Johnston).

Catharsius gorilla, Thoms. Mount Elgon (Sir H. H. Johnston). Common in West Africa. The Museum previously to this possessed no East African examples.

Rhynchophora.

Attelabidæ.

Apoderus dumosus, Gyll. Ruwenzori, 6,000 feet (G. F. Scott-Elliot).
Lixus hildebrandi, Gerst. Mount Elgon (Sir H. H. Johnston).
Lixus spp. Four species from neighbourhood of Salt Lake (G. F. Scott-Elliot).
Alcides olivaceus, Gerst. Ruwenzori, 7,000 feet (G. F. Scott-Elliot).

LONGICORNIA.

By C. J. Gahan.

Prionidæ.

Colpoderus stuhlmanni, Kolbe.

One ♂ specimen taken at Entebbe (October, 1900) by Sir H. H. Johnston.

This species was described from a female specimen collected at Ituri, west of Albert Nyanza, and the determination of the species from the male sex only must therefore be somewhat conjectural.

In the male specimen from Entebbe, the mandibles are long, divergent from the base to the middle, and then strongly incurved, so that when closed they circumscribe a somewhat transversely elliptical space; they are gradually and regularly narrowed from the middle to the apex; the antennæ do not reach beyond the middle of the elytra, the first joint is relatively as long as in *C. forcipatus*, Har., but somewhat thicker, and each of the joints from the third to the tenth is gradually widened from the base to within a short distance of the apex, being a little more prominent in front with the apical angle rounded off; the upper face of each of these joints is sparsely punctate, the lower furnished with an elongated fossa, which is very densely and minutely punctulate; the prothorax has on each side a strong submedian tooth, behind which it is obliquely and sinuately cut away towards the basal margin, the latter being much narrower than in other species of the genus; the pronotum is smooth and almost impunctate except in two depressed spaces near each side—one broader close to the lateral margin in front of the submedian tooth, the other narrower close to the oblique lateral margin behind the spine.

Cerambycidæ.

Xystrocera ansorgei, Gahan . . . . . Uganda (Dr. Ansorge).
Compsomera ansorgei, Gahan . . . . . Uganda (Dr. Ansorge).

Lamidæ.

Anthores leuconotus, Pasc. . . . . Entebbe (Oct., 1900, Sir H. H. Johnston).
Coptops fusca, Oliv. . . . . Ruwenzori (Sir H. H. Johnston).
Ancylonotus tribulus, Fab. . . . . Entebbe (Oct., 1900, Sir H. H. Johnston).
Sternotomis variabilis, Qued. . . . . Ruwenzori, 7,000 to 8,000 feet (G. F. Scott-Elliot).
S. aglaura, Kolbe . . . . . Uganda (G. F. Scott-Elliot and Dr. Stuhlmann).

shorter longitudinal band just above the shoulder, a transverse band at the middle reaching from the lateral carina to the suture, a short sutural band running from this towards the scutellum, and a transverse quadrate spot near the apex, luteous-yellow; upper surface of elytra marked with some rows of large punctures, which are, however, more or less concealed by the dark brown, or almost black, tomentum; the sides each with two rows of punctures separated by an obtuse carina; apices of elytra truncate, each furnished with two short teeth. Body underneath covered with an ashy grey pubescence, but with spots on the breast and along each side of the abdomen reddish brown. Antennæ of the female slightly longer than the body, and entirely blackish brown in colour.

Length, 16; breadth, 5½ millim.

Hab., Entebbe (October, 1900, Sir H. H. Johnston).

This species resembles *Volumnia morosa*, Pasc., in markings, but its structural characters show it to be a true *Glenea*, coming nearest, perhaps, to *G. arcuata*, Chevr., from Old Calabar.

Glenea sp.	Ruwenzori, 6,000 to 8,000 feet (G. F. Scott-Elliot).
Volumnia westermanni, Thoms.	Ruwenzori, 2,000 m. (Dr. Stuhlmann).
Nupserha sp.	Ruwenzori, 5,300 feet (G. F. Scott-Elliot).
Nupserha sp.	Ruwenzori, 6,000 to 8,000 feet (G. F. Scott-Elliot).
Phytoecia sp.	Ruwenzori, 6,000 to 8,000 feet (G. F. Scott-Elliot).

PHYTOPHAGA.

By C. J. Gahan.

Crioceridæ.

Lema sp.	Ruwenzori, 7,000 to 8,000 feet (G. F. Scott-Elliot).

Megalopodidæ.

Pœcilomorpha sp.	Ruwenzori, 6,000 to 8,000 feet.
Pœcilomorpha sp.	Ruwenzori, 6,000 to 8,000 feet (G. F. Scott-Elliot).

Eumolpidæ.

Corynodes sp.	Mount Elgon (Sir H. H. Johnston).

Galerucidæ.

Diacantha passeti, Allard	Ruwenzori (G. F. Scott-Elliot).
Æthonea sp.	Ruwenzori (G. F. Scott-Elliot).
Aulacophora fissicollis, Th., var.	Ruwenzori (G. F. Scott-Elliot).
Monolepta sp.	Ruwenzori (G. F. Scott-Elliot).

Cassididæ.

Aspidomorpha silacea, Bohem.	Ruwenzori (G. F. Scott-Elliot).
A. mutata, Bohem.	Ruwenzori (G. F. Scott-Elliot).
Laccoptera sp.	Ruwenzori (G. F. Scott-Elliot).

DIPTERA.

By Ernest E. Austen

(Zoological Department, British Museum).

So far as can be ascertained, no diptera whatever have as yet been described from Uganda, and the present brief list is based almost entirely upon a small series of specimens presented to the British Museum by Mr. G. F. Scott-Elliot, and collected by him in Ruwenzori and the neighbouring region of the Western Province. Unfortunately the majority of these are in very poor condition, while some are altogether undeterminable. The diptera of Africa generally have as yet been little collected and studied, but sufficient is known to indicate an extraordinarily wide distribution in the case of many species, some of which range from Senegambia to Delagoa Bay, and from Algeria to Cape Colony. It it practically certain, therefore, that many species described from other parts of the African continent will be found to occur within the confines of the Uganda Protectorate, and it is to be hoped that the insects belonging to this interesting order will soon receive their fair share of attention in the territories which form the subject of the present work.

Bibionidæ.

Plecia dorsalis, Macq. Ruwenzori, 5,300 feet (G. F. Scott-Elliot). This species was described from the Cape: the Museum collection contains a specimen from Pretoria (W. L. Distant).

Tipulidæ.

Tipula sp. (probably new). Between Katwe and Buamba (G. F. Scott-Elliot).
Tipula sp. (probably new). Ruwenzori, 6,000 to 8,000 feet (G. F. Scott-Elliot).
Pachyrhina sp. (probably new). Ruwenzori, 6,000 to 8,000 feet (G. F. Scott-Elliot).

Tabanidæ.

Tabanus sp. Laikipia (W. J. Gregory). Very close to *T. dorsivitta*, Walk., but the median stripe on the abdomen is narrower, while the fringe on the outside of the hind tibiæ consists of black pile, or of black mixed with pale pile, instead of pale pile alone. The palpi are clothed on a portion of their outer face with thickly set minute black hairs, which are absent or less numerous in the case of *T. dorsivitta*. It is, of course, quite possible that further researches may prove the supposed species to be nothing more than a local race of the latter. Although Laikipia is beyond the borders of the Uganda Protectorate, there can be no doubt, in view of the wide distribution of other African species of *Tabanus*, that the range of the present one extends into the Eastern Province at any rate. The true *Tabanus dorsivitta* was originally described from the Gambia, but the British Museum collection also includes specimens from Voi and Samburn, near Mombasa, as well as from the Zambezi. A specimen of the species from Laikipia, as distinguished above, was taken by Mr. L. L. Prichard on the Zambezi on February 27th, 1901, with specimens of *T. dorsivitta*; and the Museum also possesses examples from Mombasa (D. J. Wilson), and Kilimanjaro (F. J. Jackson). Specimens of both species were labelled "Hippo flies" by Mr. Prichard.

Tabanus latipes, Macq. Laikipia (W. J. Gregory) (syn. *T. africanus*, Gray; *T. fenestratus*, Walk.). Although there are no specimens in the British Museum from

any locality in the Uganda Protectorate, this species, like the former, can safely be assumed to extend into it, since *T. latipes* and *T. biguttatus*, Wied., are perhaps the two most widely distributed—as in appearance they are among the most striking—species of *Tabanus* in Central and Southern Africa. Of *T. latipes* the Museum possesses further specimens from Kinsembo, in Angola; the White Nile (Consul Petherick); Witu (Imperial British East Africa Company); Delagoa Bay (H. A. Spencer); Durban (Plant); Malvern and Isipingo, Natal, February, 1896 (G. A. K. Marshall); Kilimanjaro (F. J. Jackson); Ngatana (W. J. Gregory); and Lake Nyasa (Bellingham).

Asilidæ.

Hyperechia sp. (probably new). Entebbe, October, 1900 (Sir H. H. Johnston, K.C.B.).

Syrphidæ.

Plagiocera maculipennis, Lw. (G. F. Scott-Elliot). Between Katwe and Buamba.

Plagiocera sp. (G. F. Scott-Elliot).—Between Katwe and Buamba. Near but distinct from *Pl. maculipennis*, Lw., as shown by the more incrassated hind femora, a dark transverse band on the front, the colour of the thorax posteriorly, and the colour of the abdomen, which is also more shining.

Plagiocera? sp. nov. (G. F. Scott-Elliot). Between Katwe and Buamba; and Ruwenzori, 6,000 to 8,000 feet.

Syrphus adligatus, Wied. Between Katwe and Buamba; Ruwenzori, 6000 to 8,000 feet (G. F. Scott-Elliot). Other specimens of this species in the British Museum collection are from Ulundi, Natal, 5,000 to 6,500 feet, September, 1896 (G. A. K. Marshall); Delagoa Bay (R. W. Plant); and Cape of Good Hope.

Syrphus intersectus, Wied. Between Katwe and Buamba (G. F. Scott-Elliot). I am not altogether satisfied as to the correct identification of this species, especially since Mr. Scott-Elliot's specimens (the only ones in the collection) are in very poor condition.

Asarkina sp. (? nov.). Ruwenzori, 7,000 to 8,000 feet (G. F. Scott-Elliot). Near *Asarkina eremophila*, Lw., but the yellow bands on the second and following segments of the abdomen of uniform width, not constricted in the middle.

Asarkina ericetorum, Fabr. (*Asarkina salviæ*, Lw., "Dipt. Fauna S. Afrikas"). Between Katwe and Buamba (G. F. Scott-Elliot). This is a very widely distributed species in Asia as well as in Africa. The Museum collection includes specimens from Sikkim, 2,000 to 3,000 feet, August, 1895 (J. G. Pilcher); N. Bengal (Lieut. Campbell); Ceylon (Col. Yerbury and E. E. Green); Mount Ophir (Wallace); Penang and Singapore (H. N. Ridley); Sumatra (Sir Stamford Raffles); Lawas, N.-W. Borneo, July, 1895 (A. Everett); Labuan, March, 1895 (A. Everett); Masauadel (D. W. Barker); Sierra Leone, September, 1899 (E. E. Austen, Capt. Clements); Fernando Po (Louis Fraser); Delagoa Bay (R. W. Plant).

Megaspis sp. Between Katwe and Buamba (G. F. Scott-Elliot).

Muscidæ.

Dejeania sp. (probably new). Between Katwe and Buamba (one specimen); Ruwenzori, 7,000 to 8,000 feet (one specimen); Ruwenzori, 9,000 feet (three specimens) (G. F. Scott-Elliot). In the list of *Muscidæ* (excluding *Anthomyinæ*) of the world published by Prof. Braner in 1891 (Denkschr. K. Akad. Wiss. Wien., Bd. lviii. pp. 398-443), the only African *Dejeania* is *D. (Stomoxys) bombylans*, Fabr.—a yellow species,

with a row of conspicuous black spots down the median line of the abdomen; the species from Ruwenzori, however, has a claret-coloured abdomen.

Dexia sp. (probably new). Ruwenzori, 7,000 to 8,000 feet (G. F. Scott-Elliot). Braner's list above referred to contains no African species of *Dexia*. The present species, both in general appearance as well as in size, closely resembles the European *Dexia rustica*, Fabr., but the wings are more strongly infuscated, and there are conspicuous differences in venation, in which respect the species comes nearer to the European *Dexia vacua*, Fln.

Melanota sp. (probably new). Between Katwe and Buamba (G. F. Scott-Elliot). The only *Melanota* included in Braner's list is the European *M. volvulus*, Fabr.

MICROPEZIDÆ.

Calobata sp. Between Katwe and Buamba; Ruwenzori, 5,300 feet (G. F. tt-Elliot).

LIST OF

ORTHOPTERA OF UGANDA.

BY W. F. KIRBY, F.L.S., F.E.S.

BLATTIDÆ.

Temnopteryx ferruginea, Schulthers-Rechberg	Ruwenzori.
Deropeltis atra, Brunner	Ruwenzori.
D. melanophila, Walker	Baringo.
Rhyparobia maderæ, Fabricius	Uganda.
Polyphaga ægyptiaca, Linnæus	Baringo.

MANTIDÆ.

Tenodera capitata, Saussure	Ruwenzori.
Mantis sacra, Thunberg	Ruwenzori.
M. callifera, Wood-Mason	Uganda.
Miomantis pellucida, Saussure	Buamba (Toro)
Popa undata, Fabricius	Mount Elgon.

ACHETIDÆ.

Curtilla africana, Beauv.	Baringo
Brachytrypes membranceus, Drury	Ruwenzori.
Acheta bimarulata, De Geur	Entebbe.
Œcanthus capensis, Sauss.	Ruwenzori.

PHASGOMIRIDÆ.

Gryllacris nana, Brunner	Ruwenzori.
Enyaliopsis petersii, Schaum.	Mount Elgon and Ruwenzori.
E. durandi, Lucas	Uganda.
Eugaster loricatus, Gerstæcker	Uganda.
Zabulius lineolatus, Stäl.	Uganda.
Cymatomera spilophora, Walker	Uganda.
Anædopoda latipennis, Burmeister	Uganda.

LOCUSTIDÆ.

Tryxalis giganteus, Fuersly	Uganda.
T. acuminata, Stäl.	Baringo.
Phlæoba rufescens, Kirby, *P.Z.S.*, 1902	Baringo.
Pnorisa squalus, Stäl.	Baringo.
Chlebora thalassina, Kirby, *P.Z.S.*, 1902	Ruwenzori.
Gastrimargus determinutus, Walker	Baringo.
G. marmoratus, Thunberg	Uganda.
Locusta migratoroides, Reiche.	Uganda.
Zonocerus elegans, Thunberg	Uganda.
Phymateus degretus, Gerstæcker	Uganda.
Taphronota gabunica, Karsch.	Ruwenzori.
Dictyophorus anchietæ, Bolivar	Entebbe.
Xiphocara gibbæ, Kirby, *P.Z.S.*, 1902	Between Lakes Victoria and Tanganyika.
Acridium tataricum, Linnæus	Uganda.
Cyrtacanthacris pallidicorne, Kirby (=*ruficorne*, Burmeister, vel Fabricius)	Baringo.
Catantops capicola, Stäl.	Uganda.
C. melanostrictus, Schaum.	Ruwenzori.
Euryphymus crassus, Walker	Baringo.
Demolosus beltoni, Kirby, *P.Z.S.*, 1902	Baringo.
Pentacriola johnstoni, Kirby, *P.Z.S.*, 1902	Baringo, Ruwenzori.

LIST OF

NEUROPTERA OF UGANDA.

BY W. F. KIRBY, F.L.S., F.E.S.

LIBELLULIDÆ.

Palpopleura portia, Drury	Wadelai.
Rhyothurius ducalis, Kirby	Uganda.
Trithemis lacustris, Kirby	Wadelai.
Orthetrum truncatum, Calvert	Ruwenzori.
Caceryotes unifasciata, Olivier	Katwe to Buamba, Wadelai, Entebbe.

ÆSCHNIDÆ.

Æschna elliotti, Kirby	Ruwenzori.

CÆNAGRIMIDÆ.

Micronympha senegalensis, Rambur.	Wadelai.
Brachybasis rhomboidalis, Paliset de Beauvois	Uganda.

TERMITIDÆ.

Termes bellicosus, Linnæus	Ruwenzori.

MYRMELEONIDÆ.

Palpures inclemens, Walker . . . . Wadelai.

Cymothales johnstoni, Kirby, sp. n.

Long. enp. 33 millim. ; long. antenn. 13 millim. ; long. al. ant. 40 millim. ; long. al. post. 43 millim.

Female. Body almost uniform pale yellow ; antennal tubercles and the space between the antennæ, blackish ; antennæ long, slender, filiform, the last joint blackish, and pointed, vertex transverse, raised, with a rounded elevation on each side, between which and the eye is a blackish spot. Pronotum about twice as long as broad, gradually widened behind, a brown line on each side at the base, parallel, and another pair, diverging towards the extremity ; a black irregular band interrupted at the sutures passes from the back of the pronotum over the middle of the meso- and meta-notum ; the pleura is also marked with a broad black line. Abdomen with slender and incomplete brown or blackish lines in the back and on each side ; it is densely clothed with short hair, especially towards the extremity. Front legs pale yellow, femora thickly clothed with longer black hair and raised slender bristles on the apical half ; tibiæ with three rows of a very few long, slender diverging black bristles ; terminal spines of equal length, and extending to the third tarsal joint ; the remaining legs wanting. Wings hyaline, brilliantly iridescent, with a pink shade in some lights, and irregularly varied with pale ochraceous, especially towards the marginal area of the apical third. Fore wings very slender at the base, very broad at two-thirds of their length, and obtusely pointed. Many of the cross nervules in the costal area are double at their base, where they are marked with a pale ochraceous spot. Two oblique black irregular transverse stripes, one near the base, and the other before the middle of the wing ; the latter shades into ochraceous above, below, and in the middle. A row of irregular and interrupted ochraceous and blackish markings also crosses the wing at three-fourths of its length. Hind wings longer, narrower, and produced into a point at the extremity ; the space between the hyaline portion of the wing and the apex is irregularly varied with brown ; and the outer third of the inner margin is ochraceous, slightly marked with brown on the inner side ; and before the inner end of this ochraceous border an irregular ochraceous mark, varied with brown above, is thrown up for about one-third of the width of the wing, the whole inner area of which is otherwise entirely hyaline.

Entebbe, March 24th, 1900.

Differs from all the described species of this curious genus by its pale colouring and pattern, as well as in the comparatively long, slender antennæ, which hardly accord with the short clubbed antennæ which are usually characteristic of the family *Myrmeleonidæ*.

POLYZOA.

Plumatella princeps, Kraepelin . . . . . Lake Victoria.
P. princeps, Kraepelin . . . . . Lake Albert.
P. princeps, Kraepelin . . . . . Lake Albert Edward.
P. polymorpha, Kraepelin . . . . . Lake Albert Edward.

HYDROZOA.

Hydra, resembling *Hydra fusca* Pallas (*fide* Meissner).

PROTOZOA.

Order Lobosa.

Arcella vulgaris var. *angulosa*, Leidy	Lake Victoria.
A. discoides, Ehrenberg	Lake Victoria.
A. mitrata, Leidy	Lake Victoria.
A. apicata, Schaudinn	Lake Victoria.
Hyalosphenia papilio, Leidy	Lake Victoria.
Quadrula symmetrica, Wall	Lake Victoria.
Difflugia globosa, Dujardin	Lake Victoria.
D. pyriformis, Ehrenberg	Lake Victoria.
Nebela collaris, Ehrenberg	Lake Victoria.
N. lageniformis, Penard	Lake Victoria.
N. carinata, Leidy	Lake Albert Edward.
Lequereusia spiralis, Ehrenberg	Lake Victoria.
Euglypha alveolata, Dujardin	Lake Victoria.
Trinema euchelys, Ehrenberg	Lake Victoria.
Cyphoderia margaritacea, Schlumberger	Lake Victoria.

Order Heliozoa.

Clathrulina stuhlmanni, Schaudinn.

R. KIRKPATRICK.

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